

Appendix 3

Table 7.1.2 – Plant Photosynthesis (Net CO₂ Exchange Rate) Responses to Atmospheric CO₂ Enrichment

Table 7.1.2 reports the results of peer-reviewed scientific studies measuring the photosynthetic growth response of plants to a 300-ppm increase in atmospheric CO₂ concentration. Plants are listed by both common and/or scientific names, followed by the number of experimental studies conducted on each plant, the mean photosynthetic response to a 300-ppm increase in the air's CO₂ content, and the standard error of that mean. Whenever the CO₂ increase was not exactly 300 ppm, a linear adjustment was computed. For example, if the CO₂ increase was 350 ppm and the growth response was a 60 percent enhancement, the adjusted 300-ppm CO₂ growth response was calculated as $(300/350) \times 60\% = 51\%$.

The data in this table appear by permission of the Center for the Study of Carbon Dioxide and Global Change and were taken from its Plant Growth database as it existed on 23 March 2009. Additional data are added to the database at approximately weekly intervals and can be accessed free of charge at the Center's website at http://www.co2science.org/data/plant_growth/dry/dry_subject.php. This online database also archives information pertaining to the experimental conditions under which each plant growth experiment was conducted, as well as the complete reference to the journal article from which the experimental results were obtained. The Center's online database also lists percent increases in plant photosynthetic rate for 600- and/or 900-ppm increases in the air's CO₂ concentration.

Plant Name	# of Studies	Arithmetic Mean	Standard Error
[Tropical Tree] Pseudobombax septenatum	1	68%	0%
Abelmoschus esculentus [Okra]	1	27%	0%
Abies alba [Silver Fir]	2	37.50%	15.20%
Abutilon theophrasti [Velvet Leaf]	6	46.70%	10.30%
Acacia melanoxylon [Blackwood]	1	19%	0%
Acacia minuta [Coastal Scrub Wattle]	1	21%	0%
Acacia nilotica [Gum Arabic Tree]	2	131.50%	14.50%
Acer mono [Shantung Maple]	4	40.80%	15.10%
Acer rubrum [Red Maple]	17	94.80%	22.60%
Acer saccharinum [Silver Maple]	8	18.50%	7.80%
Acer saccharum [Sugar Maple]	3	64%	9%
Achillea millefolium [Yarrow]	3	45.30%	12.50%
Ackama rosaefolia [Small Bushy Tree]	1	-20%	0%
Actinidia deliciosa [Kiwifruit]	1	113%	0%
Agathis microstachya [Semi-Evergreen Rainforest Tree]	1	50%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Agathis robusta [Queensland Kauri]	1	56%	0%
Agave deserti [Desert Agave]	2	34.50%	3.20%
Agave salmiana [Pulque Agave]	2	39.50%	6.70%
Agave vilmoriniana [Leaf Succulent]	2	37.50%	26.50%
Agave, Desert [Agave deserti]	2	34.50%	3.20%
Agave, Pulque [Agave salmiana]	2	39.50%	6.70%
Agropyron repens [Couch Grass]	1	33%	0%
Agropyron smithii [Western Wheatgrass]	2	-4.50%	6%
Agrostis canina [Velvet Bentgrass]	1	38%	0%
Agrostis capillaris [Colonial Bentgrass]	3	46.30%	20.20%
Albizia procera [Tall Albizia]	2	121%	19.10%
Albizia, Tall [Albizia procera]	2	121%	19.10%
Alder [Alnus firma]	4	83.50%	6.40%
Alder, Black [Alnus glutinosa]	3	51%	11.80%
Alder, Manchurian [Alnus hirsuta]	7	22.10%	17.80%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Alder, Red [<i>Alnus rubra</i>]	8	73.90%	10.60%
Alfalfa [<i>Medicago sativa</i>]	17	26.20%	4.10%
Alkaligrass, Seaside [<i>Puccinellia maritima</i>]	5	84%	17.80%
<i>Alnus firma</i> [Alder]	4	83.50%	6.40%
<i>Alnus glutinosa</i> [Black Alder]	3	51%	11.80%
<i>Alnus hirsuta</i> [Manchurian Alder]	7	22.10%	17.80%
<i>Alnus rubra</i> [Red Alder]	8	73.90%	10.60%
<i>Alocasia macrorrhiza</i> [Giant Taro]	2	79%	18.40%
Alpine grassland dominated by <i>Carex curvula</i>	2	66.50%	15.20%
<i>Alternanthera crucis</i> [West Indian Joyweed]	1	91%	0%
Amaranth, Grain [<i>Amaranthus hypochondriacus</i>]	1	9%	0%
Amaranth, Redroot [<i>Amaranthus retroflexus</i>]	4	10.80%	5.30%
Amaranth, Slim [<i>Amaranthus hybridus</i>]	2	2.50%	1.80%
<i>Amaranthus hybridus</i> [Slim Amaranth]	2	2.50%	1.80%
<i>Amaranthus hypochondriacus</i> [Grain Amaranth]	1	9%	0%
<i>Amaranthus retroflexus</i> [Redroot Amaranth]	4	10.80%	5.30%
Amate [<i>Ficus obtusifolia</i>]	1	76%	0%
<i>Ambrosia artemisiifolia</i> [Annual Ragweed]	3	37.70%	5.20%
<i>Ambrosia cordifolia</i> [Tuscon Burr Ragweed]	3	45.70%	3.80%
<i>Ambrosia dumosa</i> [White Burrobush]	4	85%	28%
American Pokeweed [<i>Phytolacca americana</i>]	1	56%	0%
<i>Anacardium excelsum</i>	1	19%	0%
<i>Anagallis arvensis</i> [Scarlet Pimpernel]	1	45%	0%
<i>Ananas comosus</i> [Pineapple]	3	168.30%	55.80%
<i>Andropogon gerardii</i> [Big Bluestem]	12	24.30%	6.60%
<i>Andropogon glomeratus</i> [Bushy Bluestem]	2	-1%	3.50%
Anemone [<i>Anemone raddeana</i>]	2	65%	24.70%
<i>Anemone cylindrica</i> [Candle Anemone]	1	100%	0%
<i>Anemone raddeana</i> [Anemone]	2	65%	24.70%
<i>Anthoxanthum odoratum</i> [Sweet Vernal Grass]	1	109%	0%
<i>Anthyllis vulneraria</i> [Common Kidney Vetch]	4	27.80%	10.30%
<i>Antirrhoea trichantha</i>	1	33%	0%
Apple	2	105.50%	18.70%
Apricot [<i>Prunus armeniaca</i>]	4	62.80%	4.20%
<i>Arabidopsis thaliana</i> [Mouse Ear Cress]	8	61.30%	18.30%
<i>Arachis hypogaea</i> [Peanut]	5	36%	7.40%
<i>Arbutus unedo</i> [Strawberry Tree]	4	91.30%	32.10%
<i>Armeria maritima</i> [Thrift Seapink]	1	46%	0%
<i>Arrhenatherum elatius</i> [Tall Oatgrass]	1	39%	0%
<i>Artemisia tridentata</i> [Big Sagebrush]	2	31%	12.70%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Ash, Green [<i>Fraxinus lanceolata</i>]	1	60%	0%
Ash, Green [<i>Fraxinus pennsylvanica</i>]	5	62.40%	12.90%
<i>Asparagus officinalis</i> [Garden Asparagus]	1	25%	0%
<i>Asparagus</i> , Garden [<i>Asparagus officinalis</i>]	1	25%	0%
Aspen, Bigtooth [<i>Populus grandidentata</i>]	3	181.70%	60.70%
Aspen, Hybrid [<i>Populus tremula</i> x <i>Populus tremuloides</i>]	3	28.70%	3.30%
Aspen, Quaking [<i>Populus tremuloides</i>]	32	59.40%	6.30%
<i>Aster tripolium</i> [Sea Aster]	5	21.40%	8.50%
Aster, Sea [<i>Aster tripolium</i>]	5	21.40%	8.50%
<i>Avena barbata</i> [Slender Oat]	2	52%	5.70%
<i>Avena fatua</i> [Wild Oat]	2	53%	11.30%
<i>Avena sativa</i> [Red Oat]	2	32.50%	3.90%
Avens [Geum reptans]	1	84%	0%
<i>Azolla pinnata</i> [Water Fern]	2	35%	24.70%
Bahiagrass [<i>Paspalum notatum</i>]	1	24%	0%
Bamboo [<i>Fargesia denudata</i>]	1	40%	0%
Barley [<i>Hordeum vulgare</i>]	13	55.20%	12.60%
Barrelcactus, California [<i>Ferocactus acanthodes</i>]	1	30%	0%
Bean, Castor [<i>Ricinus communis</i>]	2	34%	0%
Bean, Faba [<i>Vicia faba</i>]	7	52.30%	10.50%
Bean, Garden [<i>Phaseolus vulgaris</i>]	24	55.80%	10.30%
Beech, American [<i>Fagus grandifolia</i>]	1	96%	0%
Beech, European [<i>Fagus sylvatica</i>]	13	61.80%	9%
Beech, Japanese [<i>Fagus crenata</i>]	5	33.60%	5.20%
Beech, Myrtle [<i>Nothofagus cunninghamii</i>]	1	55%	0%
Beech, Red [<i>Nothofagus fusca</i>]	3	40%	1.70%
Beet, Common [<i>Beta vulgaris</i>]	7	44.70%	4.90%
Begonia [<i>Begonia x hiemalis</i>]	2	70%	21.20%
<i>Begonia x hiemalis</i> [Begonia]	2	70%	21.20%
<i>Beilschmiedia pendula</i> [Slugwood]	4	21.30%	7.70%
Bentgrass, Colonial [<i>Agrostis capillaris</i>]	3	46.30%	20.20%
Bentgrass, Velvet [<i>Agrostis canina</i>]	1	38%	0%
<i>Beta vulgaris</i> [Common Beet]	7	44.70%	4.90%
Blackwood [<i>Acacia melanoxylon</i>]	1	19%	0%
Bluegrass [<i>Poa cookii</i>]	1	55%	0%
Bluegrass, Annual [<i>Poa annua</i>]	6	62%	14%
Bluegrass, Kentucky [<i>Poa pratensis</i>]	2	103%	45.30%
Bluegrass, Rough [<i>Poa trivialis</i>]	1	41%	0%
Bluestem, Big [<i>Andropogon gerardii</i>]	12	24.30%	6.60%
Bluestem, Bushy [<i>Andropogon glomeratus</i>]	2	-1%	3.50%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Bluestem, Caucasian [Bothriochloa caucasica]	2	15.50%	11%
Bluestem, Little [Schizachyrium scoparium]	3	72.30%	18.10%
Bothriochloa caucasica [Caucasian Bluestem]	2	15.50%	11%
Bottlebrush Squirreltail [Elymus elymoides]	1	21%	0%
Bouteloua curtipendula [Sideoats Grama]	2	18.50%	2.50%
Bouteloua gracilis [Blue Grama]	3	58.70%	28.90%
Brachychiton populneum [Whiteflower Kurrajong]	1	75%	0%
Brachyglottis repanda [Rangiora]	1	120%	0%
Brachypodium pinnatum [Heath Falsebrome]	1	59%	0%
Bracken [Pteridium aquilinum]	8	93.80%	7.30%
Brassica campestris [Rape Seed Mustard]	2	90.50%	37.10%
Brassica carinata [Abyssinian Mustard]	2	34.50%	10.30%
Brassica juncea [India Mustard]	2	50.50%	24.40%
Brassica napus [Canola]	12	63.50%	20.10%
Brassica nigra [Black Mustard]	2	39%	11.30%
Bristlegrass, Green [Setaria viridis]	1	13%	0%
Bristlegrass, Japanese [Setaria faberii]	4	15%	7.10%
Brittlebush, Button [Encelia frutescens]	1	30%	0%
Brome, Compact [Bromus madritensis]	1	12%	0%
Brome, Erect [Bromus erectus]	6	30.20%	9.50%
Brome, Poverty [Bromus sterilis]	1	45%	0%
Brome, Smooth [Bromus inermis]	2	29%	7.80%
Bromus erectus [Erect Brome]	6	30.20%	9.50%
Bromus inermis [Smooth Brome]	2	29%	7.80%
Bromus madritensis [Compact Brome]	1	12%	0%
Bromus sterilis [Poverty Brome]	1	45%	0%
Bromus tectorum [Cheatgrass]	1	56%	0%
Bryum pseudotriquetrum [Common Green Bryum Moss]	2	47.50%	10.30%
Bryum subrotundifolium	2	28.50%	8.10%
Buchloe dactyloides [Buchloe dactyloides]	1	27%	0%
Buck Brush [Symphiocarpos orbiculatus]	2	105%	43.80%
Buffalo Grass [Buchloe dactyloides]	1	27%	0%
Buffel Grass [Cenchrus ciliaris]	1	31%	0%
Bulrush, Seaside [Scirpus maritimus]	1	55%	0%
Bunchgrass, Perennial [Oryzopsis hymenoides]	1	47%	0%
Burnet, Small [Sanguisorba minor]	5	31.60%	4%
Burr Medick [Medicago minima]	1	0%	0%
Burrobush, White [Ambrosia dumosa]	4	85%	28%
Bush, Bellyache [Jatropha gossypifolia]	1	73%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Buttercup [Ranunculus]	1	47%	0%
Buttercup, Glacier [Ranunculus glacialis]	3	44%	8.90%
Buttercup, Tall [Ranunculus acris]	1	36%	0%
Cacao [Theobroma cacao]	1	32%	0%
Cactus, Tree [Stenocereus queretaroensis]	1	30%	0%
Cajanus cajan [Pigeonpea]	2	137.50%	26.50%
Calamagrostis epigeios [Chee Reedgrass]	1	27%	0%
Calamondin [Citrus madurensis]	2	195%	74.20%
Calcareous Grassland Community in the Swiss Jura Mountains	2	49.50%	3.20%
California Annual Grassland on Sandstone-Derived Soil	2	21%	3.50%
California Annual Grassland on Serpentine-Derived Soil	2	11%	0.70%
Calluna vulgaris [Heather]	2	49.50%	8.10%
Calophyllum longifolium [Tropical Tree]	1	-15%	0%
Caloplaxa trachyphylla [Lichen]	1	38%	0%
Camphorweed [Heterotheca subaxillaris]	1	17%	0%
Candle Anemone [Anemone cylindrica]	1	100%	0%
Canola [Brassica napus]	12	63.50%	20.10%
Cantaloupe [Cucumis melo]	4	56.80%	0.70%
Capsicum annuum [Bell Pepper]	3	41%	15.50%
Carex bigelowii [Bigelow's Sedge]	1	0%	0%
Carex curvula dominated alpine grassland	2	66.50%	15.20%
Carex flacca [Heath Sedge]	1	55%	0%
Carex paleacea [Chaffy Sedge]	1	34%	0%
Carob [Ceratonia siliqua]	6	40.50%	7.50%
Carpinus betulus [European Hornbeam]	4	14.80%	6.40%
Carrizo citrange [Citrus sinensis x Poncirus trifoliata]	2	76.50%	9.50%
Carya glabra Sweet [Pignut Hickory]	3	57.30%	22.80%
Carya ovata [Shagbark Hickory]	1	35%	0%
Cassava [Manihot esculenta Crantz]	1	56%	0%
Castanea sativa [Sweet Chesnut]	2	66.50%	37.80%
Cecropia longipes	1	17%	0%
Cenchrus ciliaris	1	31%	0%
Ceratonia siliqua [Carob]	6	40.50%	7.50%
Cercis canadensis [Eastern Redbud]	3	127.30%	48%
Chairmaker's Bulrush [Schoenoplectus americanus]	1	27%	0%
Chamaenerion angustifolium [Narrowleaved Fireweed]	1	96%	0%
Cheatgrass [Bromus tectorum]	1	56%	0%
Chenopodium album [Lambsquarters]	3	23.30%	3.40%
Cherry, Black [Prunus serotina]	3	63.70%	5.70%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Cherry, Sweet [<i>Prunus avium</i>]	1	38%	0%
Chesnut, Sweet [<i>Castanea sativa</i>]	2	66.50%	37.80%
Cinquefoil, Alpine [<i>Potentilla crantzii</i>]	1	25%	0%
<i>Cirsium arvense</i> [Canadian Thistle]	4	56.50%	8%
Cistus [<i>Cistus salviifolius</i>]	1	53%	0%
Cistus salviifolius [Cistus]	1	53%	0%
Citrus aurantium [Sour Orange]	12	111.60%	15.30%
Citrus madurensis [Calamondin]	2	195%	74.20%
Citrus paradisi Macfad. budded to Citrus reticulata Blanco (Cleopatra mandarin) rootstock [Marsh Grapefruit]	2	60%	4.90%
Citrus paradisi Macfad. budded to Poncirus trifoliata (L.) Raf. rootstock [Marsh Grapefruit]	2	70%	14.10%
Citrus reticulata [Mandarin Orange]	2	45.50%	8.80%
Citrus sinensis (L.) Osbeck budded to Citrus reticulata Blanco (Cleopatra mandarin) rootstock [Washington Naval Orange]	2	52.50%	10.30%
Citrus sinensis (L.) Osbeck budded to Poncirus trifoliata (L.) Raf. rootstock [Washington Naval Orange]	2	43.50%	8.10%
Citrus sinensis (L.) Osbeck x Citrus reticulata Blanco (Cleopatra mandarin) [Valencia Orange]	2	42.50%	15.90%
Citrus sinensis (L.) Osbeck x Poncirus trifoliata (L.) Raf. [Valencia Orange]	2	54.50%	5.30%
Citrus sinensis [Sweet Orange]	2	57%	4.90%
Citrus sinensis x Poncirus trifoliata [Carrizo Citrange]	2	76.50%	9.50%
Cladonia rangiferina (L.) Wigg. [Fruticose Lichen]	1	31%	0%
Claoxylon sandwicense [Po'ola]	3	100%	12.50%
Climbing Nightshade [<i>Solanum dulcamara</i>]	6	28.80%	3.10%
Clover, Subterranean [<i>Trifolium subterraneum</i>]	1	19%	0%
Clover, White [<i>Trifolium repens</i>]	22	49.40%	7.40%
Coastal Scrub Wattle [<i>Acacia minuta</i>]	1	21%	0%
Cocklebur, Rough [<i>Xanthium strumarium</i>]	4	30.80%	12.90%
Codlins and Cream [<i>Epilobium hirsutum</i>]	1	62%	0%
Coffea arabusta [Coffee]	2	271%	65.10%
Coffee [Coffea arabusta]	2	271%	65.10%
Collema furfuraceum [Jelly Lichen]	1	42%	0%
Conebush, Dune [<i>Leucadendron coniferum</i>]	2	38%	14.10%
Conebush, Golden [<i>Leucadendron laeureolum</i>]	2	28.50%	5.30%
Conebush, Limestone [<i>Leucadendron meridianum</i>]	2	18%	10.60%
Conebush, Sickle-leaf [<i>Leucadendron xanthoconus</i>]	2	59%	9.90%
Coolibah Tree [<i>Eucalyptus microtheca</i>]	1	57%	0%
Cordgrass, Common [<i>Spartina anglica</i>]	1	33%	0%
Cordgrass, Saltmeadow [<i>Spartina patens</i>]	5	12.80%	5.10%
Cordgrass, Smooth [<i>Spartina alterniflora</i>]	1	19%	0%
Cordia alliodora [Spanish Elm]	1	41%	0%
Corn [<i>Zea mays</i>]	21	28.50%	11.50%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
<i>Corynocarpus laevigatus</i> [Karaka Nut]	1	79%	0%
Cotton [<i>Gossypium hirsutum</i>]	18	46.40%	5.50%
Cottonwood, Eastern [<i>Populus deltoides</i>]	5	39.20%	9%
Cottonwood, Fremont's [<i>Populus fremontii</i>]	3	30.70%	15.90%
Couch Grass [<i>Agropyron repens</i>]	1	33%	0%
Couch Grass [<i>Elymus repens</i>]	1	176%	0%
Crabgrass, Hairy [<i>Digitaria sanguinalis</i>]	3	75.30%	32.70%
Creosote Bush [<i>Larrea tridentata</i>]	10	103.60%	24.40%
Cress, Mouse Ear [<i>Arabidopsis thaliana</i>]	8	61.30%	18.30%
Cucumber, Garden [<i>Cucumis sativus</i>]	3	155%	107.40%
Cucumis melo [Cantaloupe]	4	56.80%	0.70%
Cucumis sativus [Garden Cucumber]	3	155%	107.40%
Cyperus esculentus [Yellow Nutsedge]	1	-26%	0%
Cyperus rotundus [Purple Nutsedge]	1	6%	0%
Cyprus, Bald [<i>Taxodium distichum</i>]	5	88.60%	14.40%
<i>Dactylois glomerata</i> [Orchardgrass]	11	34.70%	6.20%
<i>Daucus carota</i> [Carrot]	8	105.30%	38%
Dendrosenecio brassica [Afro-alpine Giant Rosette Plant]	1	65%	0%
Dendrosenecio keniodendron [Afro-alpine Giant Rosette Plant]	1	52%	0%
Desert Eveningprimrose [<i>Oenothera primiveris</i>]	1	23%	0%
<i>Digitalis purpurea</i> [Purple Foxglove]	1	78%	0%
<i>Digitaria sanguinalis</i> [Hairy Crabgrass]	3	75.30%	32.70%
<i>Dodonaea viscosa</i> [Florida Hopbush]	1	42%	0%
Dropwort [<i>Filipendula vulgaris</i>]	2	218%	101.80%
Duckweed, Swollen [<i>Lemna gibba</i>]	2	55.50%	3.90%
<i>Echinochloa crus-galli</i> [Barnyard Grass]	7	24.90%	5%
Ecosystem, Ten Species of Tropical Forest Tree Seedlings	1	10%	0%
Ecosystem, Understory Plants in a Spruce Model Ecosystem	2	53%	9.90%
<i>Elatostema repens</i> [Tropical Rain Forest Herb]	1	68%	0%
<i>Eleusine indica</i> [Indian Goosegrass]	1	72%	0%
<i>Elymus elymoides</i> [Bottlebrush Squirreltail]	1	21%	0%
<i>Elymus repens</i> [Couch Grass]	1	176%	0%
Emblic [<i>Phyllanthus emblica</i>]	2	71%	21.90%
<i>Emilia huxleyi</i> [Marine Coccolithophorid]	5	47.80%	13.10%
<i>Encelia frutescens</i> [Button Brittlebush]	1	30%	0%
<i>Entandrophragma angolense</i> [West African Mahogany]	3	63.30%	7.20%
<i>Epilobium hirsutum</i> [Codlins and Cream]	1	62%	0%
<i>Eragrostis orcuttiana</i> [Annual Weed, C4]	1	-44%	0%
<i>Eriogonum inflatum</i> [Native American Pipeweed]	2	42.50%	15.90%
Eucalyptus and Acacia [Forest Canopy in Lysimeter]	1	53%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Eucalyptus cladocalyx [Sugargum]	2	47.50%	27.20%
Eucalyptus microtheca [Coolibah Tree]	1	57%	0%
Eucalyptus polyanthemus [Silver Dollar Gum]	1	75%	0%
Eucalyptus tetrodonta	3	26.30%	8.40%
EUROFACE Poplar Plantation	1	82%	0%
European Hornbeam [Carpinus betulus]	4	14.80%	6.40%
European Larch [Larix decidua]	3	62.70%	4.80%
Evernia mesomorpha [Ring Lichen]	1	60%	0%
Fagus crenata [Japanese Beech]	5	33.60%	5.20%
Fagus grandifolia [American Beech]	1	96%	0%
Fagus sylvatica [European Beech]	13	61.80%	9%
Falsebrome, Heath [Brachypodium pinnatum]	1	59%	0%
Fargesia denudata [Bamboo]	1	40%	0%
Feijoa sellowiana [Pineapple Guava]	1	55%	0%
Fern, Tropical [Pyrosia piloselloides]	1	19%	0%
Fern, Water [Azolla pinnata]	2	35%	24.70%
Ferocactus acanthodes [California Barrelcactus]	1	30%	0%
Fescue [Festuca rupicola]	2	112.50%	54.10%
Fescue, Meadow [Festuca pratensis]	2	34.50%	1.80%
Fescue, Small [Vulpia microstachys]	1	125%	0%
Fescue, Tall [Festuca arundinacea]	2	46.50%	2.50%
Festuca arundinacea [Tall Fescue]	2	46.50%	2.50%
Festuca pratensis [Meadow Fescue]	2	34.50%	1.80%
Festuca rupicola [Fescue]	2	112.50%	54.10%
Ficus insipida	1	47%	0%
Ficus obtusifolia [Amate]	1	76%	0%
Figwort, Desert [Scrophularia desertorum]	3	50%	21%
Filipendula vulgaris [Dropwort]	2	218%	101.80%
Fir, Douglas [Pseudotsuga menziesii]	17	32%	5.30%
Fir, Silver [Abies alba]	2	37.50%	15.20%
Fireweed, Narrowleaved [Chamaenerion angustifolium]	1	96%	0%
Fivespot, Desert [Malvastrum rotundifolium]	3	33%	5.70%
Flaveria floridana [Florida Yellowtops]	1	25%	0%
Flaveria pringlei [Yellowtops]	1	33%	0%
Flaveria trinervia [Clustered Yellowtops]	3	9%	3.70%
Florida Hopbush [Dodonaea viscosa]	1	42%	0%
Fontinalis antipyretica [Antifever Fontinalis Moss]	2	235%	166.20%
Forest Canopy in Lysimeter [Eucalyptus spp. and Acacia spp.]	1	53%	0%
Foxglove, Purple [Digitalis purpurea]	1	78%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Fragaria x ananassa [Hybrid Strawberry]	14	72.60%	12.50%
Fraxinus lanceolata [Green Ash]	1	60%	0%
Fraxinus pennsylvanica [Green Ash]	5	62.40%	12.90%
Geum reptans [Avens]	1	84%	0%
Geum rivale [Water Avens]	1	31%	0%
Ginkgo biloba [Maidenhair Tree]	4	57.50%	7.60%
Gloria de la Manana [Ipomoea carnea]	1	62%	0%
Glycine max [Soybean]	75	56.20%	9.40%
Goldenclub [Orontium aquaticum]	7	72.10%	9.30%
Goldfields, California [Lasthenia californica]	1	47%	0%
Goosegrass, Indian [Eleusine indica]	1	72%	0%
Gossypium hirsutum [Cotton]	18	46.40%	5.50%
Grama, Blue [Bouteloua gracilis]	3	58.70%	28.90%
Grama, Sideoats [Bouteloua curtipendula]	2	18.50%	2.50%
Grape, California Wild [Vitis californica]	1	57%	0%
Grapefruit, Marsh (Citrus paradisi Macfad. budded to Poncirus trifoliata L. Raf. rootstock)	2	70%	14.10%
Grapefruit, Marsh (Citrus paradisi Macfad. budded to Citrus reticulata Blanco (Cleopatra mandarin) rootstock)	2	60%	4.90%
Grass, Barnyard [Echinochloa crus-galli]	7	24.90%	5%
Grass, C3 [Koeleria cristata]	3	317.30%	237.90%
Grass, Dallas [Paspalum dilatatum]	4	80.80%	18.40%
Grass, Harding [Phalaris aquatica]	2	39.50%	17.30%
Grassland Community, Annual	4	57.30%	22.40%
Grassland dominated by Carex curvula	2	66.50%	15.20%
Guineagrass [Panicum maximum]	2	16%	3.50%
Gum Arabic Tree [Acacia nilotica]	2	131.50%	14.50%
Heather [Calluna vulgaris]	2	49.50%	8.10%
Helianthus annuus [Sunflower]	13	41.50%	6.10%
Helianthus petiolaris [Prairie Sunflower]	2	20%	0%
Herb, Tropical Rain Forest [Elatostema repens]	1	68%	0%
Heterotheca subaxillaris [Camphorweed]	1	17%	0%
Hevea brasiliensis [Rubber Tree]	8	85.90%	3.90%
Hickory, Pignut [Carya glabra]	3	57.30%	22.80%
Hickory, Shagbark [Carya ovata]	1	35%	0%
Holcus lanatus [Common Velvetgrass]	1	85%	0%
Holly-Leaved Daisybush [Olearia ilicifolia]	1	79%	0%
Honduras Mahogany [Swietenia macrophylla]	1	26%	0%
Hordeum vulgare [Barley]	13	55.20%	12.60%
Hylocomium splendens [Splendid Feather Moss]	1	100%	0%
Hymenaea courbaril [Stinkingtoe]	1	70%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Hyparrhenia rufa [Jaragua]	1	70%	0%
Indian Grass [Sorghastrum nutans]	1	19%	0%
Indian Hawthorn [Raphiolepis indica]	1	79%	0%
Ipomoea batatas [Sweet Potato]	5	39.40%	10.80%
Ipomoea carnea [Gloria de la Manana]	1	62%	0%
Japanese Knotweed [Polygonum cuspidatum]	3	32.70%	3.50%
Japanese Larch [Larix kaempferi]	4	38.80%	16.80%
Jaragua [Hyparrhenia rufa]	2	5%	0%
Jatropha gossypifolia [Bellyache Bush]	1	73%	0%
Johnsongrass [Sorghum halapense]	1	12%	0%
Joyweed, West Indian [Alternanthera crucis]	1	91%	0%
Juglans nigra [Black Walnut]	1	24%	0%
Kalankoe blossfeldiana	1	47%	0%
Karaka Nut [Corynocarpus laevigatus]	1	79%	0%
Kauri, Queensland [Agathis robusta]	1	56%	0%
Kiwifruit [Actinidia deliciosa]	1	113%	0%
Knotweed, Giant [Polygonum sachalinense]	2	43%	2.10%
Koeleria cristata [C3 Grass]	3	317.30%	237.90%
Krameria erecta [Littleleaf Ratany]	4	115.80%	28.60%
Lactuca serriola [Prickly Lettuce]	1	60%	0%
Lambsquarters [Chenopodium album]	3	23.30%	3.40%
Larix decidua [European Larch]	3	62.70%	4.80%
Larix kaempferi [Japanese Larch]	4	38.80%	16.80%
Larix Laricina [Tamarack]	1	47%	0%
Larrea tridentata [Creosote Bush]	10	103.60%	24.40%
Lasthenia californica [California Goldfields]	1	47%	0%
Leaf Succulent [Agave vilmoriniana]	2	37.50%	26.50%
Lecanora muralis [An Epilithic Lichen]	1	42%	0%
Ledum palustre [Wild Rosemary]	1	0%	0%
Lemna gibba [Swollen Duckweed]	2	55.50%	3.90%
Lettuce, Prickly [Lactuca serriola]	1	60%	0%
Leucadendron coniferum [Dune Conebush]	2	38%	14.10%
Leucadendron laeureolum [Golden Conebush]	2	28.50%	5.30%
Leucadendron meridianum [Limestone Conebush]	2	18%	10.60%
Leucadendron xanthoconus [Sickle-leaf Conebush]	2	59%	9.90%
Lichen [Caloplaxa trachyphylla]	1	38%	0%
Lichen, Epilithic [Lecanora muralis]	1	42%	0%
Lichen, Felt [Peltigera canina]	1	24%	0%
Lichen, Felt [Peltigera rufescens]	1	24%	0%
Lichen, Flavopunctelia [Parmelia praesignis]	1	60%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Lichen, Foliose [Parmelia caperata]	1	16%	0%
Lichen, Foliose [Parmelia kurokawae]	1	30%	0%
Lichen, Foliose [Peltigera polydactyla]	1	30%	0%
Lichen, Fruticose [Cladonia rangiferina]	1	31%	0%
Lichen, Jelly [Collema furfuraceum]	1	42%	0%
Lichen, Membraneous Felt [Peltigera membranacea]	1	83%	0%
Lichen, Menzies' Cartilage [Ramalina menziesii]	1	20%	0%
Lichen, Notted Rimelia [Parmelia reticulata]	1	63%	0%
Lichen, Ring [Evernia mesomorpha]	1	60%	0%
Liquidambar styraciflua [Sweetgum]	18	105.10%	21.80%
Liriodendron tulipifera [Yellow Poplar]	13	64.40%	12.40%
Lobelia telekii [Afro-alpine Giant Rosette Plant]	1	52%	0%
Lolium perenne [Perennial Ryegrass]	28	42.40%	3.80%
Lolium temulentum [Darnel Ryegrass]	2	23.50%	1.80%
Luehea seemannii	2	20%	2.10%
Lupine, Arizona [Lupinus arizonicus]	3	15.70%	6.50%
Lupine, Sundial [Lupinus perennis]	3	71.30%	32.10%
Lupinus arizonicus [Arizona Lupine]	3	15.70%	6.50%
Lupinus perennis [Sundial Lupine]	3	71.30%	32.10%
Lycopersicon esculentum [Garden Tomato]	13	22.60%	5%
Lyonia mariana [Piedmont Staggerbush]	1	27%	0%
Mahogany, West African [Entandrophragma angolense]	3	63.30%	7.20%
Maidenhair Tree [Ginkgo biloba]	4	57.50%	7.60%
Malvastrum rotundifolium [Desert Fivespot]	3	33%	5.70%
Mandarin Orange [Citrus reticulata]	2	45.50%	8.80%
Mangrove, American [Rhizophora mangle]	2	11.50%	0.40%
Manihot esculenta [Cassava]	1	56%	0%
Maple, Red [Acer rubrum]	17	94.80%	22.60%
Maple, Shantung [Acer mono]	4	40.80%	15.10%
Maple, Silver [Acer saccharinum]	8	18.50%	7.80%
Marine Coccolithophorid [Emiliana huxleyi]	5	47.80%	13.10%
Medicago glomerata	1	16%	0%
Medicago minima [Burr Medick]	1	0%	0%
Medicago sativa [Alfalfa]	17	26.20%	4.10%
Melinis minutiflora [Molassesgrass]	2	7.50%	12.40%
Metasequoia glyptostroboides [Dawn Redwood]	1	13%	0%
Millet, Broomcorn [Panicum miliaceum]	2	12%	2.10%
Molassesgrass [Melinis minutiflora]	2	7.50%	12.40%
Moss, Antifever Fontinalis [Fontinalis antipyretica]	2	235%	166.20%
Moss, Rough Goose Neck [Rhytidadelphus triquetrus]	1	66%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Moss, Splendid Feather [Hylocomium splendens]	1	100%	0%
Mungbean [Vigna radiata]	2	178%	18.40%
Mustard, Abyssinian [Brassica carinata]	2	34.50%	10.30%
Mustard, Black [Brassica nigra]	2	39%	11.30%
Mustard, India [Brassica juncea]	2	50.50%	24.40%
Mustard, Rape Seed [Brassica campestris]	2	90.50%	37.10%
Myrobalan [Terminalia chebula]	2	147.50%	37.10%
Nauclea diderrichii [Pioneer Tropical Tree]	3	69.70%	2.20%
Nettle, Stinging [Urtica dioica]	1	126%	0%
New Zealand Privet [Griselinia littoralis]	1	96%	0%
Nicotiana sylvestris [South American Tobacco]	1	55%	0%
Nicotiana tabacum [Cultivated Tobacco]	7	83%	14.90%
Night-flowering Catchfly [Silene noctiflora]	1	42%	0%
Nostoc commune	1	5%	0%
Nothofagus cunninghamii [Myrtle Beech]	1	55%	0%
Nothofagus fusca [Red Beech]	3	40%	1.70%
Nutsedge, Purple [Cyperus rotundus]	1	6%	0%
Nutsedge, Yellow [Cyperus esculentus]	1	-26%	0%
Nymphaea marliac [Water Lily]	3	39.70%	12.40%
Oak, Chapman's [Quercus chapmanii]	4	53%	4.10%
Oak, Cork [Quercus suber]	3	28.70%	16.90%
Oak, Downy [Quercus pubescens]	5	136.80%	58.50%
Oak, Durmast [Quercus petraea]	2	23.50%	0.40%
Oak, Holly [Quercus ilex]	11	91.40%	30.10%
Oak, Mongolian [Quercus crispula]	2	19%	3.50%
Oak, Mongolian [Quercus mongolica]	2	19%	3.50%
Oak, Myrtle [Quercus myrtifolia]	9	60.60%	7.70%
Oak, Northern Red [Quercus rubra]	14	65.50%	11.70%
Oak, Pedunculate [Quercus robur]	9	35.80%	6.20%
Oak, Sand Live [Quercus geminata]	6	15.70%	5.90%
Oak, White [Quercus alba]	3	142%	38.30%
Oat, Red [Avena sativa]	2	32.50%	3.90%
Oat, Slender [Avena barbata]	2	52%	5.70%
Oat, Wild [Avena fatua]	2	53%	11.30%
Oatgrass, Tall [Arrhenatherum elatius]	1	39%	0%
Oenothera primiveris [Desert Eveningprimrose]	1	23%	0%
Okra [Abelmoschus esculentus]	1	27%	0%
Olea europaea [Olive]	10	50.20%	12.60%
Olearia ilicifolia [Holly-Leaved Daisybush]	1	79%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Olive [Olea europaea]	10	50.20%	12.60%
Opuntia ficus-indica [Prickly Pear]	6	22.70%	2.60%
Orange, Sour [Citrus aurantium]	12	111.60%	15.30%
Orange, Sweet, Ridge Pineapple [Citrus sinensis]	2	57%	4.90%
Orange, Valencia [Citrus sinensis (L.) Osbeck x Citrus reticulata Blanco (Cleopatra mandarin)]	2	42.50%	15.90%
Orange, Valencia [Citrus sinensis (L.) Osbeck x Poncirus trifoliata (L.) Raf.]	2	54.50%	5.30%
Orange, Washington Naval [Citrus sinensis (L.) Osbeck budded to Citrus reticulata Blanco (Cleopatra mandarin) rootstock]	2	52.50%	10.30%
Orange, Washington Naval [Citrus sinensis (L.) Osbeck budded to Poncirus trifoliata (L.) Raf. rootstock]	2	43.50%	8.10%
Orchardgrass [Dactylis glomerata]	11	34.70%	6.20%
Orontium aquaticum [Goldenclub]	7	72.10%	9.30%
Oryza sativa [Rice]	64	49.70%	5.70%
Oryzopsis hymenoides [Perennial Bunchgrass]	1	47%	0%
Pachysandra terminalis [Japanese Spurge]	1	70%	0%
Panicgrass, Blue [Panicum antidotale]	2	-2.50%	4.60%
Panicgrass, Fall [Panicum dichotomiflorum]	1	18%	0%
Panicgrass, Lax [Panicum laxum]	2	8.50%	5.30%
Panicum antidotale [Blue Panicgrass]	2	-2.50%	4.60%
Panicum dichotomiflorum [Fall Panicgrass]	1	18%	0%
Panicum laxum [Lax Panicgrass]	2	8.50%	5.30%
Panicum maximum [Guineagrass]	2	16%	3.50%
Panicum miliaceum [Broomcorn Millet]	2	12%	2.10%
Panicum virgatum [Switchgrass]	1	64%	0%
Parmelia caperata [Foliose Lichen]	1	16%	0%
Parmelia kurokawae [Foliose Lichen]	1	30%	0%
Parmelia praesignis [Flavopunctelia Lichen]	1	60%	0%
Parmelia reticulata [Netted Rimelia Lichen]	1	63%	0%
Pascopyrum smithii [Western Wheatgrass]	5	57.40%	17.30%
Paspalum dilatatum [Dallas Grass]	4	80.80%	18.40%
Paspalum notatum [Bahia grass]	1	24%	0%
Pasture	1	29%	0%
Pea, Blackeyed [Vigna unguiculata]	4	67.80%	18.50%
Pea, Garden [Pisum sativum]	4	37.80%	5%
Peach [Prunus persica]	4	37.50%	8.70%
Peanut [Arachis hypogaea]	5	36%	7.40%
Peanut, Rhizoma	1	40%	0%
Peltigera canina [Felt Lichen]	1	24%	0%
Peltigera membranacea [Membraneous Felt Lichen]	1	83%	0%
Peltigera polydactyla [Foliose Lichen]	1	83%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Peltigera rufescens [Felt Lichen]	1	83%	0%
Pepino [Solanum muricatum]	2	74%	7.10%
Pepper, Bell [Capsicum annuum]	3	41%	15.50%
Pepper, Jamaican [Piper hispidum]	2	77.50%	15.90%
Pepper, Vera Cruz [Piper auritum]	2	67.50%	5.30%
Phalaris aquatica [Harding Grass]	2	39.50%	17.30%
Phaseolus vulgaris [Garden Bean]	24	55.80%	10.30%
Phleum pratense [Timothy]	3	30.30%	3.20%
Phyllanthus emblica [Emblic]	2	71%	21.90%
Phytolacca americana [American Pokeweed]	1	56%	0%
Phytoplankton Communities of the Nutrient-Poor Central Atlantic Ocean	2	10.50%	1.10%
Phytoplankton Community of a Fjord in Southern Norway	1	23%	0%
Picea abies [Norway Spruce]	9	48.60%	8.40%
Picea koraiensis [Spruce]	1	73%	0%
Picea mariana [Black Spruce]	5	33.60%	9.20%
Picea sitchensis [Sitka Spruce]	2	23%	4.20%
Pigeonpea [Cajanus cajan]	2	137.50%	26.50%
Pimpernel, Scarlet [Anagallis arvensis]	1	45%	0%
Pine, Eldarica [Pinus eldarica]	2	133%	0%
Pine, Jack [Pinus baksiana]	4	34.80%	6.20%
Pine, Japonese Red [Pinus densiflora]	5	26.40%	8%
Pine, Korean [Pinus koraiensis]	1	53%	0%
Pine, Loblolly [Pinus taeda]	41	96%	10.80%
Pine, Longleaf	1	41%	0%
Pine, Merkus [Pinus merkusii]	2	44.50%	3.20%
Pine, Mexican Yellow [Pinus patula]	1	47%	0%
Pine, Monterey [Pinus radiata]	13	40.20%	3.80%
Pine, Mountain [Pinus uncinata]	2	44%	7.10%
Pine, Ponderosa [Pinus ponderosa]	10	45.90%	8.80%
Pine, Scots [Pinus sylvestris]	16	77.40%	34.40%
Pineapple [Ananas comosus]	3	168.30%	55.80%
Pineapple Guava [Feijoa sellowiana]	1	55%	0%
Pinus banksiana [Pine, Jack]	4	34.80%	6.20%
Pinus densiflora [Pine, Japonese Red]	5	26.40%	8%
Pinus eldarica [Pine, Eldarica]	2	133%	0%
Pinus koraiensis [Pine, Korean]	1	53%	0%
Pinus merkusii [Pine, Merkus]	2	44.50%	3.20%
Pinus patula [Mexican Yellow Pine]	1	47%	0%
Pinus ponderosa [Ponderosa Pine]	10	45.90%	8.80%
Pinus radiata [Monterey Pine]	13	40.20%	3.80%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Pinus sylvestris [Scots Pine]	16	77.40%	34.40%
Pinus taeda [Loblolly Pine]	41	96%	10.80%
Pinus uncinata [Mountain Pine]	2	44%	7.10%
Pioneer Tropical Tree [Nauclea diderrichii]	3	69.70%	2.20%
Piper auritum [Vera Cruz Pepper]	2	67.50%	5.30%
Piper hispidum [Jamaican Pepper]	2	77.50%	15.90%
Pipeweed, Native American [Eriogonum inflatum]	2	42.50%	15.90%
Pisum sativum [Garden Pea]	4	37.80%	5%
Plantago asiatica [Plantago Asiatica]	1	45%	0%
Plantago erecta [Dwarf Plantain]	1	43%	0%
Plantago lanceolata [Narrowleaf Plantain]	6	72.50%	24.20%
Plantago maritima [Sea Plantain]	1	-30%	0%
Plantain, Dwarf [Plantago erecta]	1	43%	0%
Plantain, Narrowleaf [Plantago lanceolata]	6	72.50%	24.20%
Plantain, Sea [Plantago maritima]	1	-30%	0%
Platanus occidentalis [American Sycamore]	1	60%	0%
Poa annua [Annual Bluegrass]	6	62%	14%
Poa cookii [Bluegrass]	1	55%	0%
Poa pratensis [Kentucky Bluegrass]	2	103%	45.30%
Poa trivialis [Rough Bluegrass]	1	41%	0%
Poison Ivy [Toxicodendron radicans]	1	116%	0%
Polygonum cuspidatum [Japanese Knotweed]	3	32.70%	3.50%
Polygonum sachalinense [Giant Knotweed]	2	43%	2.10%
Po'ola [Claoxylon sandwicense]	3	100%	12.50%
Poplar, Black [Populus nigra]	6	73.20%	18.30%
Poplar, Hybrid [Populus trichocarpa x Populus deltoides]	2	37.50%	8.80%
Poplar, Robusta [Populus euramericana]	24	79.20%	15.20%
Poplar, White [Populus alba]	6	79.80%	16.40%
Poplar, Yellow [Liriodendron tulipifera]	13	64.40%	12.40%
Populus alba [White Poplar]	6	79.80%	16.40%
Populus cathayana [Poplar]	1	45%	0%
Populus deltoides [Eastern Cottonwood]	5	39.20%	9%
Populus euramericana [Robusta Poplar]	24	79.20%	15.20%
Populus fremontii [Fremont's Cottonwood]	3	30.70%	15.90%
Populus grandidentata [Bigtooth Aspen]	3	181.70%	60.70%
Populus nigra [Black Poplar]	6	73.20%	18.30%
Populus tremula x Populus tremuloides [Hybrid Aspen]	3	28.70%	3.30%
Populus tremuloides [Quaking Aspen]	32	59.40%	6.30%
Populus trichocarpa x Populus deltoides [Hybrid Poplar]	2	37.50%	8.80%
Potato, Sweet [Ipomoea batatas]	5	39.40%	10.80%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Potato, White [Solanum tuberosum]	15	33.20%	5.50%
Potentilla crantzii [Alpine Cinquefoil]	1	25%	0%
Prickly Pear [Opuntia ficus-indica]	6	22.70%	2.60%
Prochlorococcus [Marine Picocyanobacterium]	2	5.50%	2.50%
Prunus armeniaca [Apricot]	4	62.80%	4.20%
Prunus avium [Sweet Cherry]	1	38%	0%
Prunus persica [Peach]	4	37.50%	8.70%
Prunus serotina [Black Cherry]	3	63.70%	5.70%
Pseudobombax septenatum [Tropical Tree]	1	68%	0%
Pseudopanax arboreus [Puahou]	1	69%	0%
Pseudotsuga menziesii [Douglas Fir]	17	32%	5.30%
Psychotria limonensis [Forest Shrub]	1	65%	0%
Pteridium aquilinum [Bracken]	8	93.80%	7.30%
Puahou [Pseudopanax arboreus]	1	69%	0%
Puccinellia maritima [Seaside Alkaligrass]	5	84%	17.80%
Pyrrosia piloselloides [Tropical Fern]	1	19%	0%
Quercus alba [White Oak]	3	142%	38.30%
Quercus chapmanii [Chapman's Oak]	4	53%	4.10%
Quercus crispula [Mongolian Oak]	2	19%	3.50%
Quercus geminata [Sand Live Oak]	6	15.70%	5.90%
Quercus ilex [Holly Oak]	11	91.40%	30.10%
Quercus mongolica [Mongolian Oak]	22	74.40%	14.70%
Quercus myrtifolia [Myrtle Oak]	9	60.60%	7.70%
Quercus petraea [Durmast Oak]	2	23.50%	0.40%
Quercus pubescens [Downy Oak]	5	136.80%	58.50%
Quercus robur [Pedunculate Oak]	9	35.80%	6.20%
Quercus rubra [Northern Red Oak]	14	65.50%	11.70%
Quercus suber [Cork Oak]	3	28.70%	16.90%
Radish, Wild [Raphanus raphanistrum]	2	32%	7.10%
Radish, Wild [Raphanus sativus x raphanistrum]	1	109%	0%
Radish, Wild [Raphanus sativus]	8	30.40%	7%
Ragweed, Annual [Ambrosia artemisiifolia]	3	37.70%	5.20%
Ragweed, Tuscon Burr [Ambrosia cordifolia]	3	45.70%	3.80%
Rainforest Tree, Semi-Evergreen [Agathis microstachya]	1	50%	0%
Ramalina menziesii [Menzies' Cartilage Lichen]	1	20%	0%
Rangiora [Brachyglottis repanda]	1	120%	0%
Ranunculus [Buttercup]	1	47%	0%
Ranunculus acris [Tall Buttercup]	1	36%	0%
Ranunculus glacialis [Glacier Buttercup]	3	44%	8.90%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Raphanus raphanistrum [Wild Radish]	2	32%	7.10%
Raphanus sativus [Wild Radish]	8	30.40%	7%
Raphanus sativus x raphanistrum [Wild Radish]	1	109%	0%
Ratany, Littleleaf [Krameria erecta]	4	115.80%	28.60%
Redbud Tree, Eastern [Cercis canadensis]	3	127.30%	48%
Redwood, Coastal [Sequoia sempervirens]	1	31%	0%
Redwood, Dawn [Metasequoia glyptostroboides]	1	13%	0%
Reedgrass, Chee [Calamagrostis epigeios]	1	27%	0%
Rhaphiolepis indica [Indian Hawthorn]	1	79%	0%
Rhizophora mangle [American Mangrove]	2	11.50%	0.40%
Rhytidiadelphus triquetrus [Rough Goose Neck Moss]	1	66%	0%
Rice [Oryza sativa]	64	49.70%	5.70%
Ricinus communis [Castor Bean]	2	34%	0%
Rosa hybrida [Rose]	1	35%	0%
Rose [Rosa hybrida]	1	35%	0%
Rosemary, Wild [Ledum palustre]	1	0%	0%
Rosette Plant, Giant Afro-alpine [Dendrosenecio brassica]	1	65%	0%
Rosette Plant, Giant Afro-alpine [Dendrosenecio keniodendron]	1	52%	0%
Rosette Plant, Giant Afro-alpine [Lobelia telekii]	1	52%	0%
Ryegrass, Darnel [Lolium temulentum]	2	23.50%	1.80%
Ryegrass, Perennial [Lolium perenne]	28	42.40%	3.80%
Saccharum officinarum [Sugarcane]	6	11%	3.40%
Sage, Pitcher [Salvia pitcheri]	2	26.50%	1.80%
Sage, Introduced [Salvia pratensis]	1	47%	0%
Sagebrush, Big [Artemisia tridentata]	2	31%	12.70%
Salt Marsh Sedge [Scirpus olneyi]	7	61.40%	11.80%
Salvia nemorosa [Woodland Sage]	2	277.50%	136.10%
Salvia pitcheri [Pitcher Sage]	2	26.50%	1.80%
Salvia pratensis [Introduced Sage]	1	47%	0%
Sandspurry, Media [Spergularia maritima]	1	81%	0%
Sanguisorba minor [Small Burnet]	5	31.60%	4%
Schima superba [Sub-tropical Tree]	2	26%	6.40%
Schizachyrium scoparium [Little Bluestem]	3	72.30%	18.10%
Schoenoplectus americanus [Chairmaker's Bulrush]	1	27%	0%
Scirpus maritimus [Seaside Bulrush]	1	55%	0%
Scirpus olneyi [Salt Marsh Sedge]	7	61.40%	11.80%
Scirpus robustus [Sedge]	2	60%	10.60%
Scrophularia desertorum [Desert Figwort]	3	50%	21%
Scrub-Oak Ecosystem	2	98.50%	39.20%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Sedge [Scirpus robustus]	2	60%	10.60%
Sedge, Bigelow's [Carex bigelowii]	1	0%	0%
Sedge, Chaffy [Carex paleacea]	1	34%	0%
Sedge, Heath [Carex flacca]	1	55%	0%
Sequoia sempervirens [Coastal Redwood]	1	31%	0%
Setaria faberi [Japanese Bristlegrass]	4	15%	7.10%
Setaria viridis [Green Bristlegrass]	1	13%	0%
Shorea leprosula	2	57%	1.40%
Shrub, Forest [Psychotria limonensis]	1	65%	0%
Silene noctiflora [Night-flowering Catchfly]	1	42%	0%
Silver Dollar Gum [Eucalyptus polyanthemus]	1	75%	0%
Six Hardwood Tree Species	2	58%	4.90%
Solanum curtilobum [Shortlobe Solanum]	1	46%	0%
Solanum dulcamara [Climbing Nightshade]	6	28.80%	3.10%
Solanum muricatum [Pepino]	2	74%	7.10%
Solanum tuberosum [White Potato]	15	33.20%	5.50%
Solanum, Shortlobe [Solanum curtilobum]	1	46%	0%
Solidago rigida [Stiff Goldenrod]	1	7%	0%
Sorghastrum nutans [Indian Grass]	1	19%	0%
Sorghum [Sorghum bicolor]	9	26.80%	5.20%
Sorghum bicolor [Sorghum]	9	26.80%	5.20%
Sorghum halapense [Johnsongrass]	1	12%	0%
Southern California Chaparral Ecosystem	3	246.70%	13.40%
Soybean [Glycine max]	75	56.20%	9.40%
Spanish Elm [Cordia alliodora]	1	41%	0%
Spartina alterniflora [Smooth Cordgrass]	1	19%	0%
Spartina anglica [Common Cordgrass]	1	33%	0%
Spartina patens [Saltmeadow Cordgrass]	5	12.80%	5.10%
Spergularia maritima [Media Sandspurry]	1	81%	0%
Sphagnum [Sphagnum fuscum]	3	89.30%	6.60%
Sphagnum fuscum [Sphagnum]	3	89.30%	6.60%
Spinach [Spinacia oleracea]	4	37%	9%
Spinacia oleracea [Spinach]	4	37%	9%
Spruce, Black [Picea mariana]	5	33.60%	9.20%
Spruce, Norway [Picea abies]	9	48.60%	8.40%
Spruce, Sitka [Picea sitchensis]	2	23%	4.20%
Spurge, Japanese [Pachysandra terminalis]	1	70%	0%
Staggerbush, Piedmont [Lyonia mariana]	1	27%	0%
Stenocereus queretaroensis [Tree Cactus]	1	30%	0%
Stiff Goldenrod [Solidago rigida]	1	7%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Stinkingtoe [Hymenaea courbaril]	1	70%	0%
Stipa thurberiana [Thurber needlegrass]	1	56%	0%
Strawberry Tree [Arbutus unedo]	4	91.30%	32.10%
Strawberry, Hybrid [Fragaria x ananassa]	14	72.60%	12.50%
Sugar Maple [Acer saccharum]	3	64%	9%
Sugarcane [Saccharum officinarum]	6	11%	3.40%
Sugargum [Eucalyptus cladocalyx]	2	47.50%	27.20%
Sunflower [Helianthus annuus]	13	41.50%	6.10%
Sunflower, Prairie [Helianthus petiolaris]	2	20%	0%
Sweetgum [Liquidambar styraciflua]	18	105.10%	21.80%
Swietenia macrophylla [Honduras Mahogany]	1	26%	0%
Swiss Lowland Deciduous Forest	1	100%	0%
Switchgrass [Panicum virgatum]	1	64%	0%
Sycamore, American [Platanus occidentalis]	1	60%	0%
Symphiocarpos orbiculatus [Buch Brush]	2	105%	43.80%
Synechococcus [Unicellular Marine Picocyanobacterium]	1	48%	0%
Talinum triangulare	1	357%	0%
Tamarack [Larix laricina]	1	47%	0%
Taro, Giant [Alocasia macrorrhiza]	2	79%	18.40%
Taxodium distichum [Cypress, Bald]	5	88.60%	14.40%
Teak [Tectona grandis]	1	37%	0%
Tectona grandis [Teak]	1	37%	0%
Ten Species of Tropical Forest Tree Seedlings	1	10%	0%
Terminalia arjuna [Terminalia]	2	194.50%	3.90%
Terminalia chebula [Myrobalan]	2	147.50%	37.10%
Tetragastris panamensis [Tropical Tree]	1	14%	0%
Themeda triandra [C4 grass]	2	19%	3.50%
Theobroma cacao [Cacao]	1	32%	0%
Thistle, Canadian [Cirsium arvense]	4	56.50%	8%
Thrift Seapink [Armeria maritima]	1	46%	0%
Thurber needlegrass [Stipa thurberiana]	1	56%	0%
Timothy [Phleum pratense]	3	30.30%	3.20%
Tobacco, Cultivated [Nicotiana tabacum]	7	83%	14.90%
Tobacco, South American [Nicotiana glauca]	1	55%	0%
Tomato, Garden [Lycopersicon esculentum]	13	22.60%	5%
Toxicodendron radicans [Poison Ivy]	1	116%	0%
Trifolium repens [White Clover]	22	49.40%	7.40%
Trifolium subterraneum [Subterranean Clover]	1	19%	0%
Triticum aestivum [Common Wheat]	83	64.90%	10.20%
Tussock Tundra	2	237.50%	19.40%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Understory Deciduous Trees in a Pinus taeda L. Plantation	1	70%	0%
Understory Plants in a Spruce Model Ecosystem	2	53%	9.90%
Urtica dioica L. [Stinging Nettle]	1	126%	0%
Vaccinium myrtillus [Whortleberry]	2	47%	9.20%
Velvet Leaf [Abutilon theophrasti]	6	46.70%	10.30%
Velvetgrass, Common [Holcus lanatus]	1	85%	0%
Vernal Grass, Sweet [Anthoxanthum odoratum]	1	109%	0%
Vetch, Common Kidney [Anthyllis vulneraria]	4	27.80%	10.30%
Viburnum marisii [Flowering Shrub]	1	63%	0%
Vicia faba [Faba Bean]	7	52.30%	10.50%
Vigna radiata [Mungbean]	2	178%	18.40%
Vigna unguiculata [Blackeyed Pea]	4	67.80%	18.50%
Virola surinamensis [Tropical Tree]	1	31%	0%
Vitis californica [California Wild Grape]	1	57%	0%
Vulpia microstachys [Small Fescue]	1	125%	0%
Walnut, Black [Juglans nigra]	1	24%	0%
Water Lily [Nymphaea marliac]	3	39.70%	12.40%
Weed, Annual, C4 [Eragrostis orcuttiana]	1	-44%	0%
Wheat, Common [Triticum aestivum]	83	64.90%	10.20%
Wheatgrass, Western [Agropyron smithii]	2	-4.50%	6%
Wheatgrass, Western [Pascopyrum smithii]	5	57.40%	17.30%
Whiteflower Kurrajong [Brachychiton populneum]	1	75%	0%
Whortleberry [Vaccinium myrtillus]	2	47%	9.20%
Woodland Sage [Salvia nemorosa]	2	277.50%	136.10%
Xanthium strumarium L. [Rough Cocklebur]	4	30.80%	12.90%
Yarrow [Achillea millefolium L.]	4	30.80%	12.90%
Yellowtops [Flaveria pringlei Gandoger]	4	30.80%	12.90%
Yellowtops, Clustered [Flaveria trinervia (Spreng.) C. Mohr]	4	30.80%	12.90%
Yellowtops, Florida [Flaveria floridana J.R. Johnston]	4	30.80%	12.90%
Zea mays L. [Corn]	21	28.50%	11.50%

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