

Appendix 2

Table 7.1.1 – Plant Dry Weight (Biomass) Responses to Atmospheric CO₂ Enrichment

Table 7.1.1 reports the results of peer-reviewed scientific studies indicating the biomass 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 biomass 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 are printed 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 biomass for 600- and/or 900-ppm increases in the air's CO₂ concentration.

Plant Name	# of Studies	Arithmetic Mean	Standard Error
[Phytoplankton]	1	7%	0%
Abelmoschus esculentus [Okra]	1	8%	0%
Abies alba [Silver Fir]	5	33.20%	11.60%
Abies faxoniana [Minjiang Fir]	2	16.50%	1.10%
Absinth Sagewort [Artemisia absinthium]	2	161.50%	44.20%
Abutilon theophrasti [Velvet Leaf]	14	32.10%	13.70%
Acacia aneura [Mulga Acacia]	1	0%	0%
Acacia auriculiformis [Acacia, Earleaf]	1	0%	0%
Acacia catechu [Black Cutch]	6	62.70%	8.50%
Acacia coleii [Acacia]	1	89%	0%
Acacia coriacea [Wiry Wattle]	1	50%	0%
Acacia dealbata [Silver Wattle]	1	106%	0%
Acacia implexa	1	77%	0%
Acacia irrorata	1	64%	0%
Acacia magium [Brown Saiwood]	3	19%	6.90%
Acacia mearnsii [Black Wattle]	1	48%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Acacia melanoxyylon [Blackwood]	1	164%	0%
Acacia minuta [Coastal Scrub Wattle]	2	110%	22.60%
Acacia nilotica [Gum Arabic Tree]	8	316.30%	54.10%
Acacia saligna [Orange Wattle]	1	55%	0%
Acacia tetragonophylla [Acacia]	1	55%	0%
Acacia, Earleaf [Acacia auriculiformis]	3	22.70%	7.90%
Acacia, Mulga [Acacia aneura]	1	0%	0%
Acer barbatum [Southern Sugar Maple]	1	95%	0%
Acer pensylvanicum [Striped Maple]	4	28.80%	8.40%
Acer pseudoplatanus [Sycamore]	3	34.30%	12.80%
Acer rubrum [Red Maple]	13	44.20%	13.30%
Acer saccharum [Sugar Maple]	12	48.30%	13.10%
Achillea millefolium [Yarrow]	3	24.70%	12.60%
Aechmea magdalenae [Understory Herb]	1	30%	0%
Agave deserti [Desert Agave]	4	34.80%	10.30%
Agave salmiana [Agave]	1	43%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Agave vilmoriniana [Leaf Succulent]	2	14%	9.90%
Agave, Desert [Agave deserti]	4	34.80%	10.30%
Agropyron repens [C3 Grass]	1	41%	0%
Agropyron smithii [Western Wheatgrass]	3	50.30%	42.20%
Agrostemma githago [Corncockle]	1	21%	0%
Agrostis canina [Velvet Bentgrass]	1	124%	0%
Agrostis capillaris [Colonial Bentgrass]	9	37.10%	11.70%
Albiza, Tall [Albizia procera]	8	125.60%	16.30%
Albizia procera [Tall Albiza]	8	125.60%	16.30%
Alder, Black [Alnus glutinosa]	3	24.30%	9.10%
Alder, Manchurian [Alnus hirsuta]	5	24%	5.50%
Alder, Mountain [Alnus incana]	1	50%	0%
Alder, Red [Alnus rubra]	6	34.50%	7.70%
Alloteropsis semialata [Cockatoo Grass]	6	41.20%	3.70%
Alnus glutinosa [Black Alder]	3	24.30%	9.10%
Alnus hirsuta [Manchurian Alder]	5	24%	5.50%
Alnus incana [Mountain Alder]	1	50%	0%
Alnus rubra [Red Alder]	6	34.50%	7.70%
Amaranth [Amaranthus tricolor]	1	20%	0%
Amaranth, Grain [Amaranthus hypochondriacus]	2	5.50%	3.90%
Amaranth, Redroot [Amaranthus retroflexus]	16	6.40%	3.50%
Amaranth, Slender [Amaranthus viridis]	4	-2.30%	3.20%
Amaranth, Slim [Amaranthus hybridus]	6	14%	5.60%
Amaranthus hybridus [Slim Amaranth]	6	14%	5.60%
Amaranthus hypochondriacus [Grain Amaranth]	2	5.50%	3.90%
Amaranthus retroflexus [Redroot Amaranth]	16	6.40%	3.50%
Amaranthus tricolor [Amaranth]	1	20%	0%
Amaranthus viridis [Slender Amaranth]	4	-2.30%	3.20%
Ambrosia artemisiifolia [Annual Ragweed]	13	28.80%	7%
Ambrosia dumosa [White Burrobush]	2	164%	36.10%
Ambrosia trifida [Great Ragweed]	3	26%	8.20%
American Pokeweed [Phytolacca americana]	8	-2.40%	13.80%
Amorpha canescens [Leadplant]	3	40.30%	63.30%
Amur Silvergrass [Miscanthus sacchariflorus]	1	-27%	0%
Ananas comosus [Pineapple]	2	5%	9.20%
Andropogon appendiculatus [Vlei Bluegrass]	6	50.50%	6.90%
Andropogon gerardii [Big Bluestem]	12	20.30%	7.20%
Andropogon virginicus [Broomsedge]	2	0%	0%
Anemone cylindrica [Candle Anemone]	1	84%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Anemone, Candle [Anemone cylindrica]	1	84%	0%
Anthoxanthum odoratum [Sweet Vernal Grass]	1	170%	0%
Anthyllis vulneraria [Common Kidney Vetch]	6	45.30%	17.50%
Arabidopsis thaliana [Thale Cress]	10	219.70%	81.40%
Arachis glabrata [Florigraze Peanut]	2	20.50%	1.10%
Arachis hypogaea [Peanut]	24	84.20%	23.10%
Ameria maritima [Thrift Seapink]	1	-45%	0%
Arrhenatherum elatius [Tall Oatgrass]	7	18.60%	9.60%
Artemisia absinthium [Absinth Sagewort]	2	161.50%	44.20%
Artemisia tridentata [Big Sagebrush]	4	24.30%	6.10%
Asclepias syriaca [Common Milkweed]	1	69%	0%
Asclepias tuberosa [Butterfly Milkweed]	1	108%	0%
Ash, European [Fraxinus excelsior]	6	14.20%	6%
Ash, Green [Fraxinus pennsylvanica]	1	32%	0%
Ash, White [Fraxinus americana]	4	33.80%	7.30%
Aspen, Bigtooth [Populus grandidentata]	1	29%	0%
Aspen, Hybrid [Populus tremula x Populus tremuloides]	6	40.30%	18%
Aspen, Quaking [Populus tremuloides]	32	60.60%	10%
Aster pilosus [White Oldfield Aster]	2	62.50%	26.50%
Aster tripolium [Sea Aster]	4	9.50%	3.90%
Aster, Sea [Aster tripolium]	4	9.50%	3.90%
Aster, White Oldfield [Aster pilosus]	2	62.50%	26.50%
Austrodanthonia caespitosa [Wallaby Grass]	2	78%	4.20%
Avena barbata [Slender Oat]	6	22.80%	5.80%
Avena fatua [Wild Oat]	8	32.90%	8.40%
Avena sativa [Red Oat]	10	23.80%	7.30%
Avicennia germinans [Black Mangrove]	2	22.50%	5.30%
Azolla pinnata [Water Fern]	4	54.30%	27%
Bagpod [Sesbania vesicaria]	1	60%	0%
Bahiagrass [Paspalum notatum]	3	10%	1.90%
Bald Cypress [Taxodium distichum]	4	10.30%	11.90%
Barley [Hordeum vulgare]	15	41.50%	5.70%
Barrelcactus, California [Ferocactus acanthodes]	1	30%	0%
Barrelclover [Medicago truncatula]	6	52.80%	9.60%
Bauhinia variegata [Mountain Ebony]	6	82.80%	9.70%
Bean, Adzuki [Vigna angularis]	4	60%	5.20%
Bean, Broad [Vicia faba]	4	46.30%	13.50%
Bean, Castor [Ricinus communis]	7	53.60%	16.30%
Bean, Garden [Phaseolus vulgaris]	17	64.30%	20.30%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Bean, Tepary [Phaseolus acutifolius]	2	70%	9.90%
Beech, American [Fagus grandifolia]	1	88%	0%
Beech, European [Fagus sylvatica]	12	30.90%	10.60%
Beet, Common [Beta vulgaris]	24	79.50%	26%
Bellis perennis [Lawn Daisy]	3	95.70%	0.30%
Bentgrass, Colonial [Agrostis capillaris]	9	37.10%	11.70%
Bentgrass, Velvet [Agrostis canina]	1	124%	0%
Berseem [Trifolium alexandrium]	1	41%	0%
Beta vulgaris [Common Beet]	24	79.50%	26%
Betula alleghaniensis [Yellow Birch]	15	34.30%	10.20%
Betula nana [Bog Birch]	1	0%	0%
Betula papyrifera [Paper Birch]	24	72.50%	15.70%
Betula pendula [European White Birch]	27	35.40%	5.40%
Betula platyphylla [Japanese White Birch]	4	15.30%	5%
Betula populifolia [Gray Birch]	4	19.80%	8.30%
Betula pubescens [Downy Birch]	4	25.50%	6.50%
Birch, Bog [Betula nana]	1	0%	0%
Birch, Downy [Betula pubescens]	4	25.50%	6.50%
Birch, European White [Betula pendula]	27	35.40%	5.40%
Birch, Gray [Betula populifolia]	4	19.80%	8.30%
Birch, Japanese White [Betula platyphylla]	4	15.30%	5%
Birch, Paper [Betula papyrifera]	24	72.50%	15.70%
Birch, Yellow [Betula alleghaniensis]	15	34.30%	10.20%
Bittercress, Hairy [Cardamine hirsuta]	2	-0.50%	3.90%
Black Cutch [Acacia catechu]	6	62.70%	8.50%
Blackberry [Rubus]	1	675%	0%
Black-eyed Susan [Rudbeckia hirta]	1	0%	0%
Blackgram [Vigna mungo]	2	87%	19.80%
Blackwood [Acacia melanoxylon]	1	164%	0%
Bluegrass, Alpine [Poa alpina]	2	79.50%	4.60%
Bluegrass, Annual [Poa annua]	10	20.20%	9.10%
Bluegrass, Kentucky [Poa pratensis]	9	113.90%	29.80%
Bluegrass, Rough [Poa trivialis]	1	3%	0%
Bluegrass, Vlei [Andropogon appendiculatus]	6	50.50%	6.90%
Bluestem, Big [Andropogon gerardii]	12	20.30%	7.20%
Bluestem, Little [Schizachyrium scoparium]	9	18.20%	9%
Bottlebrush Squirreltail [Elymus elymoides]	1	24%	0%
Bouteloua curtipendula [Sideoats Grama]	2	7%	22.60%
Bouteloua eriopoda [Black Grama]	1	21%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Bouteloua gracilis [Blue Grama]	7	2.40%	11.10%
Brachypodium pinnatum [Heath Falsebrome]	1	0%	0%
Bracken [Pteridium aquilinum]	1	0%	0%
Brassica campestris	6	55.80%	8.50%
Brassica carinata [Abyssinian Mustard]	2	28%	1.40%
Brassica juncea [India Mustard]	2	28.50%	1.80%
Brassica kaber [Field Mustard]	1	29%	0%
Brassica napus [Oilseed Rape]	17	52.90%	8.90%
Brassica nigra [Black Mustard]	2	40.50%	10.30%
Brassica oleracea [Broccoli]	5	28.80%	8.50%
Brassica rapa [Mustard]	1	21%	0%
Bristlegrass, Green [Setaria viridis]	1	18%	0%
Bristlegrass, Japanese [Setaria faberii]	5	18.80%	6.70%
Broccoli [Brassica oleracea]	5	28.80%	8.50%
Brome, Compact [Bromus madritensis]	2	7%	14.10%
Brome, Erect [Bromus erectus]	7	34.60%	6.80%
Brome, Foxtail [Bromus rubens]	2	25%	7.80%
Brome, Poverty [Bromus sterilis]	1	0%	0%
Brome, Smooth [Bromus inermis]	1	-13%	0%
Brome, Soft [Bromus hordeaceus]	2	43%	9.90%
Brome, Soft [Bromus mollis]	2	53.50%	2.50%
Bromus erectus [Erect Brome]	7	34.60%	6.80%
Bromus hordeaceus [Soft Brome]	2	43%	9.90%
Bromus inermis [Smooth Brome]	1	-13%	0%
Bromus madritensis [Compact Brome]	2	7%	14.10%
Bromus mollis [Soft Brome]	2	53.50%	2.50%
Bromus rubens [Foxtail Brome]	2	25%	7.80%
Bromus sterilis [Poverty Brome]	1	0%	0%
Bromus tectorum [Cheatgrass]	1	36%	0%
Broomsedge [Andropogon virginicus]	2	0%	0%
Brown Saiwood [Acacia magium]	3	19%	6.90%
Buchloe dactyloides [Buffalo Grass]	1	-5%	0%
Buck Brush [Symphicarpus orbiculatus]	2	98.50%	42.10%
Buckwheat, Common [Fagopyrum esculentum]	3	17.30%	9.90%
Buffalo Grass [Buchloe dactyloides]	1	-5%	0%
Bunchgrass, Perennial [Oryzopsis hymenoides]	1	0%	0%
Burnet, Small [Sanguisorba minor]	6	81.20%	15.20%
Burr Medick [Medicago minima]	1	-6%	0%
Bushbean, Purple [Macroptilium atropurpureum]	1	43%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Cabbage [Brassica oleracea]	5	28.80%	8.50%
Calamagrostis epigeios [Chee Reedgrass]	2	98.50%	0.40%
Calluna vulgaris [Heather]	9	17.10%	5.40%
Camphorweed [Heterotheca subaxillaris]	1	20%	0%
Canada Cocklebur [Xanthium strumarium]	7	30.60%	6.40%
Canary Grass [Phalaris arundinacea]	1	49%	0%
Cantaloupe [Cucumis melo]	3	4.70%	0.70%
Caragana intermedia [Deciduous Shrub of Semi-arid Northern China]	6	54.50%	4.50%
Cardamine hirsuta [Hairy Bittercress]	2	-0.50%	3.90%
Carex bigelowii [Bigelow's Sedge]	1	0%	0%
Carex flacca [Heath Sedge]	5	73.80%	18.20%
Carex rostrata [Beaked Sedge]	1	44%	0%
Carob [Ceratonia siliqua]	10	38.10%	9.70%
Carpinus betulus [European Hornbeam]	3	35.30%	26.40%
Carrizo Citrange [Citrus sinensis x Poncirus trifoliata]	2	40.50%	1.80%
Carrot [Daucus carota sativus]	5	77.80%	32.30%
Cassava [Manihot esculenta]	2	73.50%	29.30%
Cassia fasciculata [Sleepingplant]	2	17.50%	27.20%
Cassia nictitans [Partridge Pea]	1	22%	0%
Cassia obtusifolia [Coffeeweed]	2	31.50%	7.40%
Castanea sativa [Sweet Chesnut]	4	12.80%	2.20%
Cattail [Typha latifolia]	1	-2%	0%
Cenchrus ciliaris [Buffel Grass]	1	242%	0%
Cerastium fontanum [Chickweed]	1	51%	0%
Ceratonina siliqua [Carob]	10	38.10%	9.70%
Ceratophyllum tetragonolobum	2	60%	42.40%
Chairmaker's Bulrush [Schoenoplectus americanus]	1	27%	0%
Chamaecrista nictitans [Partridge Pea]	1	0%	0%
Chamaelucium uncinatum (Schauer) x Chamaelucium floriferum (MS) [Lady Stephanie]	3	20.70%	3.40%
Chamerion angustifolium	1	228%	0%
Cheatgrass [Bromus tectorum]	1	36%	0%
Chenopodium album [Lambsquarters]	12	31.30%	7.50%
Chenopodium bonus-henricus [Good King Henry]	1	21%	0%
Cherry, Black [Prunus serotina]	2	42%	1.40%
Cherry, Sweet [Prunus avium]	8	59.80%	7.80%
Chesnut, Sweet [Castanea sativa]	4	12.80%	2.20%
Chickweed [Cerastium fontanum]	1	51%	0%
Chlorella pyrenoidosa [Common Freshwater Microalga]	2	8%	0.70%
Cirsium arvense [Canadian Thistle]	3	83.30%	33.50%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Citrus aurantium [Sour Orange Tree]	3	61.30%	13.30%
Citrus reticulata [Mandarin Orange Tree]	2	29.50%	3.90%
Citrus sinensis [Sweet Orange Tree]	2	38.50%	4.60%
Citrus sinensis x Poncirus trifoliata [Carrizo Citrange]	2	40.50%	1.80%
Clammy Cuphea [Cuphea viscosissima]	1	17%	0%
Clarkia rubicunda [Ruby Chalice Fairyfan]	1	35%	0%
Climbing Nightshade [Solanum dulcamara]	10	46.50%	9.30%
Clover, Crimson [Trifolium incarnatum]	2	21.50%	0.40%
Clover, Japanese [Kummerowia striata]	1	26%	0%
Clover, Purple [Trifolium pratense]	5	16.80%	4.40%
Clover, Silky Prairie [Petalostemum villosum]	3	-9.30%	23.40%
Clover, White [Trifolium repens]	45	59.80%	16.80%
Coastal Scrub Wattle [Acacia minuta]	2	110%	22.60%
Codlins and Cream [Epilobium hirsutum]	1	9%	0%
Coffea arabusta [Coffee]	2	175.50%	76.70%
Coffee [Coffea arabusta]	2	175.50%	76.70%
Coffeeweed [Cassia obtusifolia]	2	31.50%	7.40%
Conium maculatum [Poison Hemlock]	1	21%	0%
Coral Honeysuckle [Lonicera sempervirens]	1	30%	0%
Cordgrass, Common [Spartina anglica]	3	19%	25.10%
Cordgrass, Saltmeadow [Spartina patens]	9	9.70%	4.90%
Cordgrass, Smooth [Spartina alterniflora]	2	0%	0%
Corkscrew Vallisneria [Vallisneria spiralis]	9	9.70%	4.90%
Corn [Zea mays]	20	21.30%	4.90%
Corncockle [Agrostemma githago]	1	21%	0%
Cornus florida [Eastern Flowering Dogwood]	2	121.50%	37.10%
Correa schlechtendalii	3	9.70%	0.30%
Cotton [Gossypium hirsutum]	32	64.10%	9.40%
Cottongrass, Tussock [Eriophorum vaginatum]	5	105%	71.60%
Cottonwood, Black [Populus trichocarpa]	5	124%	93.20%
Cottonwood, Eastern [Populus deltoides]	5	60.20%	15.80%
Crabgrass, Hairy [Digitaria sanguinalis]	2	39%	12.70%
Crabgrass, Natal [Digitaria natalensis]	6	13%	3.20%
Creosote Bush [Larrea tridentata]	4	105.50%	36.20%
Crested Dogstailgrass [Cynosurus cristatus]	1	30%	0%
Crotalaria juncea [Sunn Hemp]	2	45%	9.90%
Cucumber, Garden [Cucumis sativus]	7	53.10%	7.90%
Cucumis melo [Cantaloupe]	3	4.70%	0.70%
Cucumis sativus [Garden Cucumber]	7	53.10%	7.90%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Cudweed [Gnaphalium affine]	1	21%	0%
Cuphea viscosissima [Clammy Cuphea]	1	17%	0%
Cynosurus cristatus [Crested Dogstailgrass]	1	30%	0%
Cyperus esculentus [Yellow Nutsedge]	1	16%	0%
Cyperus rotundus [Purple Nutsedge]	1	38%	0%
Dactylis glomerata [Orchardgrass]	11	16.90%	4.60%
Daisy, Lawn [Bellis perennis]	3	95.70%	0.30%
Dalbergia latifolia [Indian Rosewood]	6	51.80%	8.20%
Dallas Grass [Paspalum dilatatum]	1	82%	0%
Danthonia richardsonii Cashmore [Wallaby Grass]	9	25%	8.60%
Datura stramonium [Jimsonweed]	3	36.70%	15.80%
Daucus carota [Carrot]	5	77.80%	32.30%
Deschampsia flexuosa [Wavy Hairgrass]	1	19%	0%
Desmazeria rigida [Ferngrass]	1	26%	0%
Digitalis purpurea [Purple Foxglove]	2	17.50%	2.50%
Digitaria natalensis [Natal Crabgrass]	6	13%	3.20%
Digitaria sanguinalis [Hairy Crabgrass]	2	39%	12.70%
Dock, Bitter [Rumex obtusifolius]	6	18.70%	12.50%
Dogwood, Eastern Flowering [Cornus florida]	2	121.50%	37.10%
Dropseed, Whorled [Sporobolus pyramidalis]	6	33.50%	21.70%
Duckweed, Swollen [Lemna gibba]	2	47%	11.30%
Eastern Purple Coneflower [Echinacea purpurea]	4	191.50%	75.50%
Echinacea purpurea [Eastern Purple Coneflower]	4	191.50%	75.50%
Echinochloa crus-galli [Barnyard Grass]	15	72.10%	16.70%
Echium plantagineum [Salvation Jane]	4	15.80%	6.20%
Ecosystem, 10 Species of Tropical Forest Tree Seedlings	1	-5%	0%
Ecosystem, 12 Species	3	22.70%	5.50%
Ecosystem, 12 Species From Fertile Permanent Grassland	15	67.50%	13.20%
Ecosystem, 7 Species	1	9%	0%
Ecosystem, Pasture	1	12%	0%
Ecosystem, Understory Plants in a Spruce Model Ecosystem	3	33.70%	13.40%
Eelgrass, Common [Zostera marina]	1	24%	0%
Eggplant [Solanum melongena]	1	41%	0%
Eichhornia crassipes [Common Water Hyacinth]	5	51%	19.30%
Eleusine indica [Indian Goosegrass]	6	34%	17.40%
Elm, Winged [Ulmus alata]	1	30%	0%
Elymus athericus	4	46.30%	20%
Elymus elymoides Botlebrush Squirreltail	1	24%	0%
Emblc [Phyllanthus emblica]	8	165%	16%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Emiliania huxleyi [Marine Coccolithophores]	1	130%	0%
English Holly [Ilex aquifolium]	1	15%	0%
English Laurel [Prunus laurocerasus]	1	56%	0%
Epilobium hirsutum [Codlins and Cream]	1	9%	0%
Eragrostis curvula [Weeping Lovegrass]	6	42.20%	9.80%
Eragrostis orcuttiana [Annual Weed, C4]	1	462%	0%
Eragrostis racemosa [Narrowheart Lovegrass]	6	11.70%	1.80%
Erica tetralix [Crossleaf Heath]	4	23.80%	10.50%
Eriophorum vaginatum [Tussock Cottongrass]	5	105%	71.60%
Eucalyptus cladocalyx [Sugargum]	2	87.50%	9.50%
Eucalyptus miniata [Darwin Woollybutt]	9	-2%	5.40%
Eucalyptus tetrodonta	9	132.80%	19.90%
Euphorbia lathyris [Myrtle Spurge]	2	36.50%	4.60%
European Hornbeam [Carpinus betulus]	3	35.30%	26.40%
European Larch [Larix decidua]	1	142%	0%
Fagopyrum esculentum [Common Buckwheat]	3	17.30%	9.90%
Fagus grandifolia [American Beech]	1	88%	0%
Fagus sylvatica [European Beech]	12	30.90%	10.60%
Fairyfan, Ruby Chalice [Clarkia rubicunda]	1	35%	0%
Falsebrome, Heath [Brachypodium pinnatum]	1	0%	0%
Fenugreek [Trigonella foenum-graecum]	2	91%	33.20%
Fern, Tropical [Pyrosia piloselloides]	1	78%	0%
Fern, Water [Azolla pinnata var. pinnata]	4	54.30%	27%
Ferngrass [Desmazeria rigida]	1	26%	0%
Ferocactus acanthodes [California Barrelcactus]	1	30%	0%
Fescue, Meadow [Festuca pratensis]	11	20.30%	10%
Fescue, Red [Festuca rubra]	3	30.70%	15.90%
Fescue, Sheep [Festuca ovina]	6	47.70%	16.60%
Fescue, Small [Vulpia microstachys]	2	-4.50%	8.10%
Fescue, Tall [Festuca arundinacea]	11	25.40%	7.20%
Fescue, Tall Meadow [Festuca elatior]	1	40%	0%
Festuca arundinacea [Tall Fescue]	11	25.40%	7.20%
Festuca elatior [Tall Meadow Fescue]	1	40%	0%
Festuca ovina [Sheep Fescue]	6	47.70%	16.60%
Festuca pratensis [Meadow Fescue]	11	20.30%	10%
Festuca rubra [Red Fescue]	3	30.70%	15.90%
Fir, Douglas [Pseudotsuga menziesii]	6	9.70%	3.90%
Fir, Minjiang [Abies faxoniana]	2	16.50%	1.10%
Fir, Silver [Abies alba]	5	33.20%	11.60%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Flaveria trinervia [Clustered Yellowtops]	1	46%	0%
Flax, Common [Linum usitatissimum]	2	68.50%	18.70%
Flax, Common [Linum usitatissimum] in mixed stands with Silene cretica	2	63.50%	15.90%
Foxglove, Purple [Digitalis purpurea]	2	17.50%	2.50%
Fragaria x ananassa [Hybrid Strawberry]	4	42.80%	13.10%
Fraxinus americana [White Ash]	4	33.80%	7.30%
Fraxinus excelsior [European Ash]	6	14.20%	6%
Fraxinus pennsylvanica [Green Ash]	1	32%	0%
Galactia elliotii [Elliott's Milkpea]	1	110%	0%
Gentian, Dwarf [Gentiana germanica]	1	54%	0%
Gentiana germanica [Dwarf Gentian]	1	54%	0%
Glycine max [Soybean]	162	47.60%	3.10%
Gnaphalium affine [Cudweed]	1	21%	0%
Goldenclub [Orontium aquaticum]	12	19.80%	3%
Goldenrod, Canadian [Solidago canadensis]	2	1750%	1237.40%
Goldenrod, Stiff [Solidago rigida]	1	27%	0%
Goldfields, California [Lasthenia californica]	2	27%	26.90%
Gonolobus cteniophorus	2	3.50%	12.40%
Good King Henry [Chenopodium bonus-henricus]	1	21%	0%
Goosegrass, Indian [Eleusine indica]	6	34%	17.40%
Gossypium hirsutum [Cotton]	32	64.10%	9.40%
Grama, Black [Bouteloua eriopoda]	1	21%	0%
Grama, Blue [Bouteloua gracilis]	7	2.40%	11.10%
Grama, Sideoats [Bouteloua curtipendula]	2	7%	22.60%
Grass, Barnyard [Echinochloa crus-galli]	15	72.10%	16.70%
Grass, Buffel [Cenchrus ciliaris]	1	242%	0%
Grass, C3 [Agropyron repens]	1	41%	0%
Grass, C3 [Koeleria cristata]	3	32%	39.80%
Grass, Cockatoo [Alloteropsis semialata]	6	41.20%	3.70%
Grass, Harding [Phalaris aquatica]	13	24.60%	8.50%
Grass, Kangaroo [Themeda triandra]	8	61.80%	16.20%
Grass, Red Natal [Melinis repens]	6	25.80%	7%
Grass, Sudan [Sorghum sudanense]	1	14%	0%
Grass, Wallaby [Danthonia richardsonii]	9	25%	8.60%
Grassland Community	2	25%	4.20%
Grassland Community	2	19%	2.80%
Grassland Community, Irish Neutral	4	28.50%	6.80%
Grassland, Calcareous, (C3)	11	27.40%	2.80%
Grassland, Calcareous, dominated by Bromus erectus	3	28%	2.90%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Grassland, California Annual	2	20.50%	2.50%
Grassland, Species-poor on a peaty gley soil	1	50%	0%
Grassland, Species-rich on a brown earth soil over limestone	1	56%	0%
Gray Field Speedwell [Veronica didyma]	1	26%	0%
Groundsel, Common [Senecio vulgaris]	2	66%	25.50%
Guineagrass [Panicum maximum]	1	-2%	0%
Gum Arabic Tree [Acacia nilotica]	8	316.30%	54.10%
Gypsophila paniculata [Babysbreath Gypsophila]	1	23%	0%
Hairgrass, Wavy [Deschampsia flexuosa]	1	19%	0%
Hayfield Tarweed [Hemizonia congesta]	2	48.50%	10.30%
Heath, Crossleaf [Erica tetralix]	4	23.80%	10.50%
Heather [Calluna vulgaris]	9	17.10%	5.40%
Hedera helix [English Ivy]	3	66%	10.60%
Helianthemum nummularium [Sun Rose]	1	0%	0%
Helianthus annuus [Sunflower]	11	37.50%	7.80%
Hellroot [Orobancha minor]	1	0%	0%
Hemizonia congesta [Hayfield Tarweed]	2	48.50%	10.30%
Hemlock, Eastern [Tsuga canadensis]	3	34%	4.50%
Hemlock, Poison [Conium maculatum]	1	21%	0%
Heterosigma akashiwo [A Marine Raphidophyte]	2	15%	2.10%
Heterotheca subaxillaris [Camphorweed]	1	20%	0%
Hilograss [Paspalum conjugatum]	1	18%	0%
Hiziki (Brown Seaweed) [Hizikia fusiforme]	1	45%	0%
Hizikia fusiforme [Hiziki (Brown Seaweed)]	1	45%	0%
Holcus lanatus [Common Velvetgrass]	11	38.50%	10.40%
Hordeum vulgare [Barley]	15	41.50%	5.70%
Hydrilla verticillata [Water Thyme]	7	21.90%	3.30%
Hymenocallis littoralis [Spider Lily]	2	52%	2.80%
Hyparrhenia rufa [Jaragua]	2	33.50%	1.80%
Hypericum perforatum [St. John's Wort]	1	72%	0%
Ilex aquifolium [English Holly]	1	15%	0%
Indian Grass, Yellow [Sorghastrum nutans]	3	9.70%	14.40%
Indian Rosewood [Dalbergia latifolia]	6	51.80%	8.20%
Ipomoea batatas [Sweet Potato]	6	33.70%	9.30%
Ipomoea hederacea [Ivyleaf Morningglory]	2	-21%	8.50%
Ipomoea lacunosa [Whitestar]	2	15%	14.80%
Ipomoea purpurea [Tall Morningglory]	2	-29.50%	1.80%
Ivy, English [Hedera helix]	3	66%	10.60%
Japanese Honeysuckle [Lonicera japonica]	4	312.80%	73.70%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Japanese Knotweed [Polygonum cuspidatum]	3	48%	14.80%
Japanese Larch [Larix kaempferi]	4	26.80%	10.30%
Jaragua [Hyparrhenia rufa]	2	33.50%	1.80%
Jimsonweed [Datura stramonium]	3	36.70%	15.80%
Johnsongrass [Sorghum halepense]	3	-13%	14.30%
Joshua Tree [Yucca brevifolia]	1	65%	0%
Juncus effuses [Soft Rush]	1	-5%	0%
Junegrass, Prairie [Koeleria macrantha]	1	2%	0%
Kielmeyera coriacea [Tropical Savanna Tree]	3	88.70%	55.50%
Knotweed, Curlytop [Polygonum lapathifolium]	5	19.40%	4.20%
Knotweed, Marshpepper [Polygonum hydropiper]	2	40.50%	15.90%
Koeleria cristata [C3 Grass]	3	32%	39.80%
Koeleria macrantha [Prairie Junegrass]	1	2%	0%
Krameria erecta [Littleleaf Ratany]	2	102.50%	1.10%
Kummerowia striata [Japanese Clover]	1	26%	0%
Lactuca sativa [Garden Lettuce]	2	18.50%	6%
Lady Stephanie [Chamaelucium uncinatum (Schauer) x Chamaelucium floriferum]	3	20.70%	3.40%
Ladysthumb, Spotted [Polygonum persicaria]	2	38%	9.20%
Lambsquarters [Chenopodium album]	12	31.30%	7.50%
Lantana [Lantana camara]	2	82.50%	5.30%
Lantana camara [Lantana]	2	82.50%	5.30%
Larix decidua [European Larch]	1	142%	0%
Larix kaempferi [Japanese Larch]	4	26.80%	10.30%
Larix laricina [Tamarack]	1	56%	0%
Larrea tridentata [Creosote Bush]	4	105.50%	36.20%
Lasthenia californica [California Goldfields]	2	27%	26.90%
Layia platyglossa [Coastal Tidytops]	1	12%	0%
Leadplant [Amorpha canescens]	3	40.30%	63.30%
Leaf Succulent [Agave vilmoriniana]	2	14%	9.90%
Ledum palustre [Wild Rosemary]	1	0%	0%
Lemna gibba [Swollen Duckweed]	2	47%	11.30%
Lepidium latifolium [Pepperweed]	2	40%	7.10%
Lespedeza capitata [Roundhead Lespedeza]	3	333.70%	136.10%
Lespedeza cuneata [Chinese Lespedeza]	1	0%	0%
Lespedeza, Roundhead [Lespedeza capitata]	3	333.70%	136.10%
Lettuce, Garden [Lactuca sativa]	2	18.50%	6%
Linum usitatissimum [Common Flax]	2	68.50%	18.70%
Linum usitatissimum [Common Flax] in mixed stands with Silene cretica	2	63.50%	15.90%
Liquidambar styraciflua [Sweetgum]	20	132.40%	23.50%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Liriodendron tulipifera [Yellow Poplar]	3	34%	4.70%
Littleleaf Ratany [Krameria erecta]	2	102.50%	1.10%
Loblolly Pine (Pinus taeda)	65	61.90%	7.90%
Locust, Black [Robinia pseudoacacia]	4	346%	242.10%
Lolium multiflorum [Italian Ryegrass]	6	11.50%	5.10%
Lolium perenne [Perennial Ryegrass]	74	35.10%	5.30%
Lolium temulentum [Darnel Ryegrass]	3	44.70%	29.20%
Lomentaria articulata [Seaweed]	1	269%	0%
Lonicera japonica [Japanese Honeysuckle]	4	312.80%	73.70%
Lonicera sempervirens [Coral Honeysuckle]	1	30%	0%
Lotus corniculatus [Birdfoot Deer Vetch]	8	49.30%	12.90%
Lotus pedunculatus [Big Trefoil]	6	56%	26.50%
Lovegrass, Narrowheart [Eragrostis racemosa]	6	11.70%	1.80%
Lovegrass, Weeping [Eragrostis curvula]	6	42.20%	9.80%
Lupine, European Yellow [Lupinus luteus]	1	21%	0%
Lupine, Narrowleaf [Lupinus angustifolius]	3	38%	7%
Lupine, Sundial [Lupinus perennis]	11	56.40%	6.60%
Lupine, White [Lupinus albus]	4	10.30%	6.40%
Lupinus albus [White Lupine]	4	10.30%	6.40%
Lupinus angustifolius [Narrowleaf Lupine]	3	38%	7%
Lupinus luteus [European Yellow Lupine]	1	21%	0%
Lupinus perennis [Sundial Lupine]	11	56.40%	6.60%
Lycopersicon esculentum [Garden Tomato]	35	31.90%	5%
Lycopersicon lycopersicum [Tomato]	2	29.50%	5.30%
Macroptilium atropurpureum [Purple Bushbean]	1	43%	0%
Manchurian Wildrice [Zizania latifolia]	1	-5%	0%
Mandarin Orange Tree [Citrus reticulata]	2	29.50%	3.90%
Mangifera indica [Mango]	1	36%	0%
Mango [Mangifera indica]	1	36%	0%
Mangrove, American [Rhizophora mangle]	3	39.30%	6.10%
Mangrove, Black [Avicennia germinans]	2	22.50%	5.30%
Manihot esculenta [Cassava]	2	73.50%	29.30%
Maple, Red [Acer rubrum]	13	44.20%	13.30%
Maple, Southern Sugar [Acer barbatum]	1	95%	0%
Maple, Striped [Acer pensylvanicum]	4	28.80%	8.40%
Maple, Sugar [Acer saccharum]	12	48.30%	13.10%
Maranthus corymbosa	3	69%	14.30%
Marine Coccolithophores [Emiliania huxleyi]	1	130%	0%
Medicago glomerata	1	17%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Medicago lupulina [Black Medick]	1	68%	0%
Medicago minima [Burr Medick]	1	-6%	0%
Medicago sativa [Alfalfa]	68	33.20%	3.70%
Medicago truncatula [Barrelclover]	6	52.80%	9.60%
Medick, Black [Medicago lupulina]	1	68%	0%
Melinis minutiflora [Molassesgrass]	2	32%	8.50%
Melinis repens [Red Natal Grass]	6	25.80%	7%
Mentha x piperita [Peppermint]	1	29%	0%
Menzies' Baby Blue Eyes [Nemophila menziesii]	1	0%	0%
Mesquite, Honey [Prosopis glandulosa]	13	37.70%	5.20%
Microalga, Common Freshwater [Chlorella pyrenoidosa]	2	8%	0.70%
Microstegium vimineum [Nepalese Browntop]	3	-53.30%	15.60%
Milkpea Elliott's [Galactia elliottii]	1	110%	0%
Milkweed, Butterfly [Asclepias tuberosa]	1	108%	0%
Milkweed, Common [Asclepias syriaca]	1	69%	0%
Millet, Broomcorn [Panicum miliaceum]	1	-13%	0%
Miscanthus sacchariflorus [Amur Silvergrass]	1	-27%	0%
Molassesgrass [Melinis minutiflora]	2	32%	8.50%
Molinia caerulea [Purple Moorgrass]	9	36.60%	9.40%
Moorgrass, Purple [Molinia caerulea]	9	36.60%	9.40%
Morningglory, Ivyleaf [Ipomoea hederacea]	2	-21%	8.50%
Morningglory, Tall [Ipomoea purpurea]	2	-29.50%	1.80%
Mountain Ebony [Bauhinia variegata]	6	82.80%	9.70%
Mungbean [Vigna radiata]	2	31.50%	16.60%
Mustard [Brassica rapa]	1	21%	0%
Mustard, Abyssinian [Brassica carinata]	2	28%	1.40%
Mustard, Black [Brassica nigra]	2	40.50%	10.30%
Mustard, Field [Brassica kaber]	1	29%	0%
Mustard, India [Brassica juncea]	2	28.50%	1.80%
Mustard, Rape Seed [Brassica campestris]	6	55.80%	8.50%
Mustard, White [Sinapis alba]	4	21.30%	4.10%
Myrobalan [Terminalia chebula]	8	442.50%	52.50%
Myrtle Spurge [Euphorbia lathyris]	2	36.50%	4.60%
Nasturtium [Tropaeolum majus]	3	42.30%	10.80%
Nemophila menziesii [Menzies' Baby Blue Eyes]	1	0%	0%
Nepalese Browntop [Microstegium vimineum]	3	-53.30%	15.60%
Nettle, Stinging [Urtica dioica]	1	26%	0%
Nicotiana tabacum [Cultivated Tobacco]	6	60.50%	11%
Night-flowering Catchfly [Silene noctiflora]	6	60.50%	11%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Nutsedge, Purple [Cyperus rotundus]	1	38%	0%
Nutsedge, Yellow [Cyperus esculentus]	1	16%	0%
Nymphaea marliac [Water Lily]	2	162%	76.40%
Oak, Chapman's [Quercus chapmanii]	2	325%	123.70%
Oak, Cork [Quercus suber]	4	46.80%	13.70%
Oak, Durmast [Quercus petraea]	6	53.20%	18.70%
Oak, Holly [Quercus ilex]	4	38%	4.80%
Oak, Mongolian [Quercus mongolica]	6	54.30%	19.50%
Oak, Northern Red [Quercus rubra]	7	55.30%	25.20%
Oak, Pedunculate [Quercus robur]	8	30.60%	12.80%
Oak, Sand Live [Quercus geminata]	5	9.40%	5.40%
Oak, White [Quercus alba]	6	146.70%	30.10%
Oat, Red [Avena sativa]	10	23.80%	7.30%
Oat, Slender [Avena barbata]	6	22.80%	5.80%
Oat, Wild [Avena fatua]	8	32.90%	8.40%
Oatgrass, Tall [Arrhenatherum elatius]	7	18.60%	9.60%
Okra [Abelmoschus esculentus]	1	8%	0%
Olea europaea [Olive Tree]	4	14.50%	9.40%
Olive Tree [Olea europaea]	4	14.50%	9.40%
Opuntia ficus-indica [Prickly Pear]	9	38.20%	13.30%
Orchardgrass [Dactylis glomerata]	11	16.90%	4.60%
Orobanche minor [Hellroot]	1	0%	0%
Orontium aquaticum [Goldenclub]	12	19.80%	3%
Oryza sativa [Rice]	137	34.30%	2.10%
Oryzopsis hymenoides [Perennial Bunchgrass]	1	0%	0%
Panicgrass Blue [Panicum coloratum]	2	1%	15.60%
Panicgrass, Blue [Panicum antidotale]	4	15.50%	6.30%
Panicgrass, Fall [Panicum dichotomiflorum]	1	24%	0%
Panicgrass, Lax [Panicum laxum]	4	30%	11%
Panicum antidotale [Blue Panicgrass]	4	15.50%	6.30%
Panicum coloratum [Blue Panicgrass]	2	1%	15.60%
Panicum dichotomiflorum (Fall Panicgrass)	1	24%	0%
Panicum laxum [Lax Panicgrass]	4	30%	11%
Panicum maximum [Guineagrass]	1	-2%	0%
Panicum miliaceum [Broomcorn Millet]	1	-13%	0%
Panicum virgatum [Switchgrass]	1	-1%	0%
Pansy [Viola x wittrockiana]	1	30%	0%
Papaver setigerum [Dwarf Breadseed Poppy]	1	390%	0%
Pascopyrum smithii [Western Wheatgrass]	4	73.50%	16.80%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Paspalum conjugatum [Hilograss]	1	18%	0%
Paspalum dilatatum [Dallas Grass]	1	82%	0%
Paspalum notatum [Bahagrass]	3	10%	1.90%
Paspalum plicatulum [Brownseed Paspalum]	1	9%	0%
Paspalum, Brownseed [Paspalum plicatulum]	1	9%	0%
Pasture	1	9%	0%
Pasture	2	24.50%	13.10%
Pasture in Switzerland [Dactylis glomerata (Orchard Grass) and Trifolium pratense (Red Clover)]	12	29.10%	5.70%
Pea, Blackeyed [Vigna unguiculata]	3	83.70%	12.20%
Pea, Garden [Pisum sativum]	11	33.30%	6.30%
Pea, Partridge [Cassia nictitans]	1	22%	0%
Pea, Partridge [Chamaecrista nictitans]	1	0%	0%
Peach Tree [Prunus persica]	4	27.80%	0.80%
Peanut [Arachis hypogaea]	24	84.20%	23.10%
Peanut, Florigraze [Arachis glabrata]	2	20.50%	1.10%
Peanut, Rhizoma	1	57%	0%
Pencillflower [Stylosanthes scabra]	2	72%	10.60%
Pepino [Solanum muricatum]	4	69.80%	20.50%
Peppermint [Mentha x piperita]	1	29%	0%
Pepperweed [Lepidium latifolium]	2	40%	7.10%
Peruvian Groundcherry [Physalis peruviana]	1	23%	0%
Petalostemum villosum [Silky Prairie-Clover]	3	-9.30%	23.40%
Petunia [Petunia hybrida]	6	55%	9.80%
Petunia hybrida [Petunia]	6	55%	9.80%
Phaeocystis [Phytoplankton]	1	0%	0%
Phalaris aquatica [Harding Grass]	13	24.60%	8.50%
Phalaris arundinacea [Canary Grass]	1	49%	0%
Pharus latifolius [Broad Stalkgrass]	1	144%	0%
Phaseolus acutifolius [Tepary Bean]	2	70%	9.90%
Phaseolus vulgaris [Garden Bean]	17	64.30%	20.30%
Phleum pratense [Timothy]	18	12.20%	3.20%
Phragmites communis [Wetland Reed]	1	-8%	0%
Phragmites japonica [Wetland Reed]	1	-11%	0%
Phyllanthus emblica [Emblic]	8	165%	16%
Physalis peruviana [Peruvian Groundcherry]	1	23%	0%
Phytolacca americana [American Pokeweed]	8	-2.40%	13.80%
Picea abies [Norway Spruce]	11	35.90%	5.50%
Picea glauca [White Spruce]	2	82%	49.50%
Picea koraiensis [Spruce]	7	37.90%	8.70%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Picea mariana [Black Spruce]	14	22.80%	3%
Picea sitchensis [Sitka Spruce]	7	20.70%	5%
Pine, Black [Pinus nigra]	1	22%	0%
Pine, Eastern White [Pinus strobus]	3	31.70%	9%
Pine, Eldarica [Pinus eldarica]	1	153%	0%
Pine, Jack [Pinus banksiana]	3	18.30%	8.80%
Pine, Japanese Red [Pinus densiflora]	7	15.70%	7.60%
Pine, Korean [Pinus koraiensis]	2	27%	15.60%
Pine, Loblolly [Pinus taeda]	65	61.90%	7.90%
Pine, Longleaf [Pinus palustris]	8	19%	7.40%
Pine, Merkus [Pinus merkusii]	2	200%	43.10%
Pine, Monterey [Pinus radiata]	1	36%	0%
Pine, Mountain [Pinus uncinata]	1	0%	0%
Pine, Ponderosa [Pinus ponderosa]	46	64.20%	11.80%
Pine, Scots [Pinus sylvestris]	46	41%	5.50%
Pineapple [Ananas comosus]	2	5%	9.20%
Pinus banksiana [Jack Pine]	3	18.30%	8.80%
Pinus densiflora [Japanese Red Pine]	7	15.70%	7.60%
Pinus eldarica [Eldarica Pine]	1	153%	0%
Pinus koraiensis [Korean Pine]	2	27%	15.60%
Pinus merkusii [Merkus Pine]	2	200%	43.10%
Pinus nigra [Black Pine]	1	22%	0%
Pinus palustris [Longleaf Pine]	8	19%	7.40%
Pinus ponderosa [Ponderosa Pine]	46	64.20%	11.80%
Pinus radiata [Monterey Pine]	1	36%	0%
Pinus strobus [Eastern White Pine]	3	31.70%	9%
Pinus sylvestris [Scots Pine]	46	41%	5.50%
Pinus taeda [Loblolly Pine]	65	61.90%	7.90%
Pinus uncinata [Mountain Pine]	1	0%	0%
Pisum sativum [Garden Pea]	11	33.30%	6.30%
Plantago erecta [Dwarf Plantain]	2	4.50%	11.70%
Plantago lanceolata [Narrowleaf Plantain]	11	46.20%	15.20%
Plantago major [Common Plantain]	3	31.70%	4.60%
Plantago maritima [Sea Plantain]	3	101.70%	27.90%
Plantago media [Hoary Plantain]	2	26.50%	5.30%
Plantago virginica [Virginia Plantain]	1	45%	0%
Plantain, Common [Plantago major]	3	31.70%	4.60%
Plantain, Dwarf [Plantago erecta]	2	4.50%	11.70%
Plantain, Hoary [Plantago media]	2	26.50%	5.30%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Plantain, Narrowleaf [Plantago lanceolata]	11	46.20%	15.20%
Plantain, Sea [Plantago maritima]	3	101.70%	27.90%
Plantain, Virginia [Plantago virginica]	1	45%	0%
Poa alpina [Alpine Bluegrass]	2	79.50%	4.60%
Poa annua [Annual Bluegrass]	10	20.20%	9.10%
Poa pratensis [Kentucky Bluegrass]	9	113.90%	29.80%
Poa trivialis [Rough Bluegrass]	1	3%	0%
Poison Ivy [Toxicodendron radicans]	7	75.70%	13.70%
Polygonum cuspidatum [Japanese Knotweed]	3	48%	14.80%
Polygonum hydropiper [Marshpepper Knotweed]	2	40.50%	15.90%
Polygonum lapathifolium [Curlytop Knotweed]	5	19.40%	4.20%
Polygonum pensylvanicum [Pennsylvania Smartweed]	3	55.70%	1.80%
Polygonum persicaria [Spotted Ladythumb]	2	38%	9.20%
Poplar Clone, Robusta [Populus deltoides x Populus nigra]	6	63.30%	13.70%
Poplar, Black [Populus nigra]	15	53.90%	12.20%
Poplar, Hybrid [Populus trichocarpa x Populus deltoides]	7	76.70%	23.40%
Poplar, Robusta [Populus euramericana]	13	41.70%	8.80%
Poplar, White [Populus alba]	14	43.90%	4.70%
Poplar, Yellow [Liriodendron tulipifera]	3	34%	4.70%
Poppy, Dwarf Breadseed [Papaver setigerum]	1	390%	0%
Populus alba [White Poplar]	14	43.90%	4.70%
Populus deltoides [Eastern Cottonwood]	5	60.20%	15.80%
Populus deltoides x Populus nigra [Robusta Poplar Clone]	6	63.30%	13.70%
Populus euramericana [Robusta Poplar]	13	41.70%	8.80%
Populus grandidentata [Bigtooth Aspen]	1	29%	0%
Populus nigra [Black Poplar]	15	53.90%	12.20%
Populus tremula x Populus tremuloides [Hybrid Aspen]	6	40.30%	18%
Populus tremuloides [Quaking Aspen]	32	60.60%	10%
Populus trichocarpa [Black Cottonwood]	5	124%	93.20%
Populus trichocarpa x Populus deltoides [Hybrid Poplar]	7	76.70%	23.40%
Potato, Sweet [Ipomoea batatas]	6	33.70%	9.30%
Potato, White [Solanum tuberosum]	33	29.50%	3.60%
Pothos [Scindapsus aureus]	1	39%	0%
Prairie, Native Tallgrass	3	62%	17.40%
Prairie, Native Tallgrass Dominated by Andropogon gerardii	2	13.50%	9.50%
Prickly Pear [Opuntia ficus-indica]	9	38.20%	13.30%
Prorocentrum minimum [A Marine Dinoflagellate]	2	20%	3.50%
Prosopis flexuosa [Deciduous Tree]	1	42%	0%
Prosopis glandulosa [Honey Mesquite]	13	37.70%	5.20%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Prunella vulgaris [Selfheal]	2	78%	17.70%
Prunus avium [Sweet Cherry]	8	59.80%	7.80%
Prunus laurocerasus [English Laurel]	1	56%	0%
Prunus persica [Peach Tree]	4	27.80%	0.80%
Prunus serotina [Black Cherry]	2	42%	1.40%
Pseudotsuga menziesii [Douglas Fir]	6	9.70%	3.90%
Pteridium aquilinum [Bracken]	1	0%	0%
Puccinellia maritima [Seaside Alkaligrass]	4	61%	31%
Pueraria lobata [Leguminous Weed]	1	98%	0%
Purple Witchweed [Striga hermonthica]	1	-65%	0%
Pyrrosia piloselloides [Tropical Fern]	1	78%	0%
Quercus alba L. [White Oak]	6	146.70%	30.10%
Quercus cerrioides [Oak]	1	35%	0%
Quercus chapmanii Sargentii [Chapman's Oak]	2	325%	123.70%
Quercus geminata [Sand Live Oak]	5	9.40%	5.40%
Quercus ilex L. [Holly Oak]	4	38%	4.80%
Quercus margaretta [Sand Post Oak]	2	20.50%	14.50%
Quercus mongolica [Mongolian Oak]	6	54.30%	19.50%
Quercus myrtifolia Wild. [Myrtle Oak]	8	140.30%	63.20%
Quercus petraea (Mattuschka) Liebl. [Durmast Oak]	6	53.20%	18.70%
Quercus robur L. [Pedunculate Oak]	8	30.60%	12.80%
Quercus rubra L. [Northern Red Oak]	7	55.30%	25.20%
Quercus suber L. [Cork Oak]	4	46.80%	13.70%
Radish, Wild [Raphanus sativus x raphanistrum]	1	33%	0%
Radish, Wild [Raphanus sativus]	18	75.30%	14.30%
Ragweed, Annual [Ambrosia artemisiifolia]	13	28.80%	7%
Ragweed, Great [Ambrosia trifida]	3	26%	8.20%
Ragwort [Senecio jacobea]	1	21%	0%
Rape, Oilseed [Brassica napus]	17	52.90%	8.90%
Raphanus sativus [Wild Radish]	18	75.30%	14.30%
Raphanus sativus x raphanistrum [Wild Radish]	1	33%	0%
Reedgrass, Chee [Calamagrostis epigeios]	2	98.50%	0.40%
Rhinanthus alectorolophus [European Yellowrattle]	2	75%	68.60%
Rhinanthus minor [Yellow Rattle]	1	50%	0%
Rhizophora mangle [American Mangrove]	3	39.30%	6.10%
Rice [Oryza sativa]	137	34.30%	2.10%
Ricinus communis [Castor Bean]	7	53.60%	16.30%
Robinia pseudoacacia [Black Locust]	4	346%	242.10%
Rosa hybrida [Rose]	4	26.50%	7.90%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Rose [<i>Rosa hybrida</i>]	4	26.50%	7.90%
Rose, Sun [<i>Helianthemum nummularium</i>]	1	0%	0%
Rosemary, Wild [<i>Ledum palustre</i>]	1	0%	0%
Rubus [Blackberry]	1	675%	0%
Rudbeckia hirta [Black-eyed Susan]	1	0%	0%
Rumex acetosella [Common Sheep Sorrel]	2	24%	2.10%
Rumex obtusifolius [Bitter Dock]	6	18.70%	12.50%
Ryegrass, Darnel [<i>Lolium temulentum</i>]	3	44.70%	29.20%
Ryegrass, Italian [<i>Lolium multiflorum</i>]	6	11.50%	5.10%
Ryegrass, Perennial [<i>Lolium perenne</i>]	74	35.10%	5.30%
Saccharina latissima [Sugar Kelp]	74	35.10%	5.30%
Saccharum officinarum [Sugarcane]	3	25.70%	8.10%
Sage, Pitcher [<i>Salvia pitcheri</i>]	2	25.50%	2.50%
Sagebrush, Big [<i>Artemisia tridentata</i>]	4	24.30%	6.10%
Salvation Jane [<i>Echium plantagineum</i>]	4	15.80%	6.20%
Salvia pitcheri [Pitcher Sage]	2	25.50%	2.50%
Sanguisorba minor [Small Burnet]	6	81.20%	15.20%
Schima superba [Subtropical Tree]	2	27.50%	11%
Schizachyrium scoparium [Little Bluestem]	9	18.20%	9%
Schoenoplectus americanus [Chairmaker's Bulrush]	1	27%	0%
Scindapsus aureus [Pothos]	1	39%	0%
Scirpus lacustris [Softstem Bulrush]	1	-2%	0%
Scirpus olneyi [Salt Marsh Sedge]	10	17.40%	7.70%
Seaweed [<i>Lomentaria articulata</i>]	1	269%	0%
Sedge, Beaked [<i>Carex rostrata</i>]	1	44%	0%
Sedge, Bigelow's [<i>Carex bigelowii</i>]	1	0%	0%
Sedge, Heath [<i>Carex flacca</i>]	5	73.80%	18.20%
Sedge, Salt Marsh [<i>Scirpus olneyi</i>]	10	17.40%	7.70%
Selfheal [<i>Prunella vulgaris</i>]	2	78%	17.70%
Senecio jacobea [Ragwort]	1	21%	0%
Senecio vulgaris [Common Groundsel]	2	66%	25.50%
Sesbania vesicaria [Bagpod]	1	60%	0%
Setaria glauca [Yellow Bristle Grass]	1	16%	0%
Setaria faberi [Japanese Bristlegrass]	5	18.80%	6.70%
Setaria viridis [Green Bristlegrass]	1	18%	0%
Sheep Sorrel, Common [<i>Rumex acetosella</i>]	2	24%	2.10%
Shorea leprosula	2	38.50%	11%
Silene cretica in mixed stands with <i>Linum usitatissimum</i> [Common Flax]	2	98.50%	17.30%
Silene latifolia [White Champion]	6	43.50%	9%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Silene noctiflora [Night-flowering Catchfly]	1	44%	0%
Sinapis alba [White Mustard]	4	21.30%	4.10%
Sleepingplant [<i>Cassia fasciculata</i>]	2	17.50%	27.20%
Smartweed, Pennsylvania [<i>Polygonum pensylvanicum</i>]	3	55.70%	1.80%
Soft Rush [<i>Juncus effuses</i>]	1	-5%	0%
Softstem Bulrush [<i>Scirpus lacustris</i>]	1	-2%	0%
Solanum curtilobum [Shortlobe Solanum]	2	63%	5.70%
Solanum dulcamara [Climbing Nightshade]	10	46.50%	9.30%
Solanum lycopersicum [Tomato]	2	152.50%	23%
Solanum melongena [Eggplant]	1	41%	0%
Solanum muricatum [Pepino]	4	69.80%	20.50%
Solanum tuberosum [White Potato]	33	29.50%	3.60%
Solanum, Shortlobe [<i>Solanum curtilobum</i>]	2	63%	5.70%
Solidago canadensis [Canadian Goldenrod]	2	1750%	1237.40%
Solidago rigida [Stiff Goldenrod]	1	27%	0%
Sorghastrum nutans [Yellow Indian Grass]	3	9.70%	14.40%
Sorghum [<i>Sorghum bicolor</i>]	24	18.50%	3.60%
Sorghum bicolor [Sorghum]	24	18.50%	3.60%
Sorghum halepense [Johnsongrass]	3	-13%	14.30%
Sorghum sudanense [Sudan Grass]	1	14%	0%
Sour Orange Tree [<i>Citrus aurantium</i>]	3	61.30%	13.30%
Soybean [<i>Glycine max</i>]	162	47.60%	3.10%
Spartina alterniflora [Smooth Cordgrass]	2	0%	0%
Spartina anglica [Common Cordgrass]	3	19%	25.10%
Spartina patens [Saltmeadow Cordgrass]	9	9.70%	4.90%
Spergula arvensis [Corn Spurrey]	2	-20%	7.80%
Sphagnum cuspidatum [Toothed Sphagnum]	1	42%	0%
Sphagnum magellanicum [Magellan's Sphagnum]	1	26%	0%
Sphagnum papillosum [Papillose Sphagnum]	2	57.50%	0.40%
Sphagnum recurvum [Recurved Sphagnum]	4	12.30%	7%
Sphagnum, Magellan's [<i>Sphagnum magellanicum</i>]	1	26%	0%
Sphagnum, Papillose [<i>Sphagnum papillosum</i>]	2	57.50%	0.40%
Sphagnum, Recurved [<i>Sphagnum recurvum</i>]	4	12.30%	7%
Sphagnum, Toothed [<i>Sphagnum cuspidatum</i>]	1	42%	0%
Spider Lily [<i>Hymenocallis littoralis</i>]	2	52%	2.80%
Spinach [<i>Spinacia oleracea</i>]	2	17.50%	1.80%
Spinacia oleracea [Spinach]	2	17.50%	1.80%
Sporobolus pyramidalis [Whorled Dropseed]	6	33.50%	21.70%
Spring Vetch [<i>Vicia lathyroides</i>]	1	114%	0%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Spruce [Picea koraiensis]	7	37.90%	8.70%
Spruce, Black [Picea mariana]	14	22.80%	3%
Spruce, Norway [Picea abies]	11	35.90%	5.50%
Spruce, Sitka [Picea sitchensis]	7	20.70%	5%
Spruce, White [Picea glauca]	2	82%	49.50%
Spurrey, Corn [Spergula arvensis]	2	-20%	7.80%
St. John's Wort [Hypericum perforatum]	1	72%	0%
Stalkgrass, Broad [Pharus latifolius]	1	144%	0%
Stipa thurberiana [Thurber Needlegrass]	1	11%	0%
Strawberry, Hybrid [Fragaria x ananassa]	4	42.80%	13.10%
Striga hermonthica [Purple Witchweed]	1	-65%	0%
Stylosanthes scabra [Pencilflower]	2	72%	10.60%
Subterranean Clover [Trifolium subterraneum]	1	756%	0%
Sugarcane [Saccharum officinarum]	3	25.70%	8.10%
Sugargum [Eucalyptus cladocalyx]	2	87.50%	9.50%
Sunflower [Helianthus annuus]	11	37.50%	7.80%
Sunn Hemp [Crotalaria juncea]	2	45%	9.90%
Sweet Orange Tree [Citrus sinensis]	2	38.50%	4.60%
Sweet Vernal Grass [Anthoxanthum odoratum]	1	170%	0%
Sweetgum [Liquidambar styraciflua]	20	132.40%	23.50%
Switchgrass [Panicum virgatum]	1	-1%	0%
Sycamore [Acer pseudoplatanus]	3	34.30%	12.80%
Symphiocarpus orbiculatus [Buck Brush]	2	98.50%	42.10%
Tamarack [Larix Laricina]	1	56%	0%
Taxodium distichum [Bald Cypress]	5	28%	5.40%
Taxus baccata [English Yew]	5	28%	5.40%
Teak, Common [Tectona grandis]	6	54.20%	5.40%
Tectona grandis [Teak, Common]	6	54.20%	5.40%
Terminalia arjuna [Terminalia]	8	190.60%	35.10%
Terminalia chebula [Myrobalan]	8	442.50%	52.50%
Thale Cress [Arabidopsis thaliana]	10	219.70%	81.40%
Themeda triandra [Kangaroo Grass]	8	61.80%	16.20%
Thinouia tomocarpa Standley	2	94%	28.30%
Thistle, Canadian [Cirsium arvense]	3	83.30%	33.50%
Thrift Seapink Needlegrass [Armeria maritima]	1	-45%	0%
Thurber Needlegrass [Stipa thurberiana]	1	11%	0%
Thyme, Water [Hydrilla verticillata]	7	21.90%	3.30%
Tidytops, Coastal [Layia platyglossa]	1	12%	0%
Timothy [Phleum pratense]	18	12.20%	3.20%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Tobacco, Cultivated [Nicotiana tabacum]	6	60.50%	11%
Tomato [Lycopersicon lycopersicum]	2	29.50%	5.30%
Tomato [Solanum lycopersicum]	2	152.50%	23%
Tomato, Garden [Lycopersicon esculentum]	35	31.90%	5%
Toxicodendron radicans [Poison Ivy]	7	75.70%	13.70%
Trachypogon plumosus [C4 South American Grass]	2	-28.50%	3.20%
Tree, Tropical Savanna [Kielmeyera coriacea]	3	88.70%	55.50%
Trefoil, Big [Lotus pedunculatus]	6	56%	26.50%
Tridens flavus [Purpletop Tridens]	1	0%	0%
Tridens, Purpletop [Tridens flavus]	1	0%	0%
Trifolium alexandrinum [Berseem]	1	41%	0%
Trifolium incarnatum [Crimson Clover]	2	21.50%	0.40%
Trifolium pratense [Purple Clover]	5	16.80%	4.40%
Trifolium repens [White Clover]	45	59.80%	16.80%
Trifolium subterraneum [Subterranean Clover]	1	756%	0%
Trigonella foenugraecum [Fenugreek]	2	91%	33.20%
Triticum aestivum [Common Wheat]	214	33%	2%
Triticum turgidum [Rivet Wheat]	4	24.50%	2.50%
Tropaeolum majus [Nasturtium]	3	42.30%	10.80%
Tsuga canadensis [Eastern Hemlock]	3	34%	4.50%
Typha latifolia [Cattail]	1	-2%	0%
Ulmus alata [Winged Elm]	1	30%	0%
Understory Herb [Aechmea magdalenae]	1	30%	0%
Urtica dioica [Stinging Nettle]	1	26%	0%
Vaccinium myrtillus [Whortleberry]	6	60.70%	10%
Vallisneria spiralis [Corkscrew Vallisneria]	2	14%	5.70%
Velvet Leaf [Abutilon theophrasti]	14	32.10%	13.70%
Velvetgrass, Common [Holcus lanatus]	11	38.50%	10.40%
Veronica didyma [Gray Field Speedwell]	1	26%	0%
Vetch, Bird [Vicia cracca]	1	47%	0%
Vetch, Birdfoot Deer [Lotus corniculatus]	8	49.30%	12.90%
Vetch, Common Kidney [Anthyllis vulneraria]	6	45.30%	17.50%
Vicia cracca [Bird Vetch]	1	47%	0%
Vicia faba [Faba Bean]	4	46.30%	13.50%
Vicia lathyroides [Spring Vetch]	1	114%	0%
Vigna angularis [Adzuki Bean]	4	60%	5.20%
Vigna mungo [Blackgram]	2	87%	19.80%
Vigna radiata [Mungbean]	2	31.50%	16.60%
Vigna unguiculata [Blackeyed Pea]	3	83.70%	12.20%

Plant Name	# of Studies	Arithmetic Mean	Standard Error
Viola x wittrockiana [Pansy]	1	30%	0%
Vulpia microstachys [Small Fescue]	2	-4.50%	8.10%
Wallaby Grass [Austrodanthonia caespitosa]	2	78%	4.20%
Water Hyacinth, Common [Eichhornia crassipes]	5	51%	19.30%
Water Lily [Nymphaea marliac]	2	162%	76.40%
Wattle, Black [Acacia mearnsii]	1	48%	0%
Wattle, Orange [Acacia saligna]	1	55%	0%
Wattle, Silver [Acacia dealbata]	1	106%	0%
Wattle, Wiry [Acacia coriacea]	1	50%	0%
Weed, Annual, C4 [Eragrostis orcuttiana]	1	462%	0%
Weed, Leguminous [Pueraria lobata]	1	98%	0%
Weeds, Unspecified	2	0%	0%
Wheat, Common [Triticum aestivum]	214	33%	2%
Wheat, Rivet [Triticum turgidum]	4	24.50%	2.50%
Wheatgrass, Western [Agropyron smithii]	3	50.30%	42.20%
Wheatgrass, Western [Pascopyrum smithii]	4	73.50%	16.80%
White Burrobush [Ambrosia dumosa]	2	164%	36.10%
Whitestar [Ipomoea lacunosa]	2	15%	14.80%
Whortleberry [Vaccinium myrtillus]	6	60.70%	10%
Woollybutt, Darwin [Eucalyptus miniata]	9	-2%	5.40%
Xanthium strumarium var. canadense [Canada Cocklebur]	7	30.60%	6.40%
Yarrow [Achillea millefolium]	3	24.70%	12.60%
Yellow Bristle Grass [Setaria glauca]	1	16%	0%
Yellow Rattle [Rhinanthus minor]	1	50%	0%
Yellowrattle, European [Rhinanthus alectorolophus]	2	75%	68.60%
Yellowtops, Clustered [Flaveria trinervia]	1	46%	0%
Yucca brevifolia [Joshua Tree]	1	65%	0%
Yucca schidigera [Mojave Yucca]	1	86%	0%
Yucca whipplei [Chaparral Yucca]	1	13%	0%
Yucca, Chaparral [Yucca whipplei]	1	13%	0%
Yucca, Mojave [Yucca schidigera]	1	86%	0%
Zea mays [Corn]	20	21.30%	4.90%
Zizania latifolia [Manchurian Wildrice]	1	-5%	0%
Zostera marina [Eelgrass, Common]	1	24%	0%

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