APPENDIX 4

Conversion Factors for Leaf Area to Biomass

Conversion factors used to estimate leaf biomass (g) from leaf area (m^2) for individual species are shown in Table 13. Values are based on averages from numerous unpublished field studies.

Table 13.—Conversion factors to estimate leaf biomass from leaf area, by species

Species	g/m^2	Species	g/m^2
Abies balsamea	104.17	*Betula species*	62.50
Abies lasiocarpa	217.39	*Bischofia polycarpa*	178.57
Acacia aneura	476.19	*Brachychiton populneus*	87.53
Acacia melanoxylon	161.94	*Broussonetia papyrifera*	57.47
Acer buergerianum	123.46	*Caesalpinia gilliesii*	89.29
Acer mono	37.17	*Carpinus caroliniana*	60.24
Acer negundo	91.48	*Carya alba*	57.31
Acer pensylvanicum	32.57	*Carya aquatica*	232.27
Acer platanoides	53.97	*Carya cordiformis*	62.86
Acer pseudoplatanus	69.93	*Carya glabra*	19.06
Acer rubrum	67.34	*Carya illinoinensis*	69.54
Acer saccharinum	52.63	*Carya ovata*	73.24
Acer saccharum	60.24	*Carya pallida*	59.88
Aesculus californica	88.11	*Carya species*	56.26
Aesculus flava	65.15	*Cassia nemophila*	259.74
Aesculus hippocastanum	69.93	*Castanea dentata*	45.66
Albizia julibrissin	43.48	*Castanea pumila*	150.86
Alnus incana ssp. Rugosa	85.84	*Catalpa bignonioides*	53.33
Alnus rhombifolia	87.72	*Catalpa species*	70.92
Alnus species	55.25	*Celtis laevigata*	67.99
Amelanchier alnifolia	100.00	*Celtis occidentalis*	52.03
Amelanchier arborea	60.98	*Cercis canadensis*	64.04
Arecastrum romanzoffianum	183.49	*Cercocarpus montanus*	123.46
Artemisia tridentata	312.50	*Chamaecyparis obtusa*	250.00
Asimina triloba	167.76	*Chamaedaphne calyculata*	84.75
Atriplex canescens	119.05	*Cinnamomum camphora*	67.57
Atriplex polycarpa	253.16	*Citrullus lanatus*	85.47
Baccharis pilularis	192.31	*Citrus limon*	147.06
Betula alleghaniensis	41.41	*Citrus sinensis*	124.61
Betula nigra	77.51	*Cornus alternifolia*	66.67
Betula papyrifera	69.93	*Cornus florida*	58.10

Appendix 4 in: Nowak, David J. 2020. **Understanding i-Tree: Summary of programs and methods.** General Technical Report NRS-200. Madison, WI: U.S. Department of Agriculture, Forest Service, Northern Research Station. https://doi.org/10.2737/NRS-GTR-200-Appendix4

Table 13.—Continued

Species	g/m^2
Cornus mas	66.23
Cornus racemosa	47.73
Cornus sericea	57.22
Corylus cornuta	69.44
Crataegus marshallii	245.23
Crataegus monogyna	125.79
Crataegus species	35.97
Ericameria nauseosa	180.51
Eucalyptus camaldulensis	138.41
Eucalyptus grandis	115.61
Eucalyptus sideroxylon	136.99
Euryops pectinatus	224.72
Fagus crenata	60.61
Fagus grandifolia	42.61
Fraxinus americana	56.82
Fraxinus excelsior	106.38
Fraxinus nigra	59.52
Fraxinus pennsylvanica	65.22
Fraxinus species	90.09
Garrya flavescens	217.39
Ginkgo biloba	44.09
Gleditsia triacanthos	104.71
Gossypium hirsutum	69.32
Grevillea robusta	121.58
Hamamelis virginiana	58.82
Hibiscus rosa-sinensis	85.11
Hibiscus syriacus	48.31
Ilex opaca	133.69
Juglans nigra	80.14
Juglans regia	42.15
Juniperus species	277.78
Kalmia latifolia	120.48
Koelreuteria paniculata	80.81
Larix laricina	46.30
Larix leptolepis	64.52
Ledum groenlandicum	107.53
Ligustrum lucidum	90.91
Liquidambar styraciflua	45.91
Liriodendron tulipifera	58.95

Species	g/m^2
Lonicera x bella	49.26
Lycopersicon esculentum	79.21
Lysiloma watsonii	105.82
Maclura pomifera	100.53
Magnolia acuminata	32.79
Magnolia grandiflora	135.04
Magnolia virginiana	142.92
Mahonia bealei	86.21
Malus pumila	86.21
Metasequoia glyptostroboides	56.50
Morella cerifera	344.09
Morus alba	73.15
Morus rubra	99.32
Nerium oleander	148.70
Nyssa sylvatica	34.59
Osmanthus fragrans	86.96
Ostrya virginiana	65.28
Oxydendrum arboreum	30.44
Parthenocissus tricuspidata	49.18
Photinia serratifolia	102.04
Picea abies	166.67
Picea abies x asperata	178.57
Picea asperata	99.50
Picea bicolor	194.17
Picea engelmannii	212.77
Picea glauca	160.64
Picea glehnii	229.89
Picea jezoensis	487.80
Picea koraiensis	95.24
Picea koyamai	204.08
Picea mariana	188.68
Picea montigena	153.85
Picea omorika	188.68
Pinus banksiana	83.33
Pinus contorta	192.31
Pinus resinosa	147.06
Pinus strobus	64.31
Pinus taeda	81.11
Pistacia chinensis	76.34

Table 13.—Continued

Species	g/m^2
Pistacia vera	155.04
Platanus hybrida	43.67
Platanus occidentalis	48.45
Populus alba	86.96
Populus angustifolia	87.72
Populus balsamifera trichoca	54.05
Populus fremontii	86.58
Populus grandidentata	51.02
Populus nigra	72.12
Populus species	67.57
Populus tremuloides	78.74
Populus x canadensis	92.42
Prunus alleghaniensis	212.77
Prunus cerasifera	60.75
Prunus dulcis	101.27
Prunus pensylvanica	48.27
Prunus serotina	77.55
Prunus virginiana	77.52
Pterocarya stenoptera	80.00
Pueraria lobata	30.03
Quercus agrifolia	141.68
Quercus alba	72.74
Quercus berberidifolia	149.32
Quercus chrysolepis	168.94
Quercus coccinea	72.87
Quercus douglasii	121.41
Quercus ellipsoidalis	103.09
Quercus engelmannii	151.16
Quercus falcata	77.98
Quercus gambelii	133.33
Quercus kelloggii	102.89
Quercus lobata	101.12
Quercus michauxii	60.21
Quercus nigra	94.56
Quercus pagoda	112.82
Quercus palustris	90.50
Quercus phellos	88.71
Quercus prinus	78.59
Quercus robur	66.58

Species	g/m^2
Quercus rubra	79.68
Quercus stellata	85.11
Quercus suber	177.78
Quercus velutina	70.67
Quercus virginiana	209.93
Quercus wislizeni	148.36
Rhamnus cathartica	44.44
Rhododendron maximum	200.00
Rhus glabra	55.14
Rhus lancea	122.70
Rhus ovata	320.00
Rhus species	80.00
Robinia pseudoacacia	53.84
Rosmarinus officinalis	275.86
Rubus species	37.31
Salix sericea	65.05
Salix species	61.73
Salvia leucophylla	246.91
Sassafras albidum	49.18
Senna artemisioides	186.05
Sophora japonica	113.64
Sorbus species	79.37
Spartium junceum	291.97
Symphoricarpos occidentalis	55.87
Syringa vulgaris	96.46
Thuja occidentalis	192.31
Tilia americana	29.20
Tilia cordata	74.91
Tilia platyphyllos	59.17
Tsuga canadensis	92.88
Tsuga heterophylla	55.25
Ulmus alata	72.25
Ulmus americana	72.73
Ulmus parvifolia	113.64
Ulmus rubra	44.77
Vitex agnus-castus	133.78
Vitis vinifera	66.67
Washingtonia robusta	154.44

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