

## DOUGLAS-FIR COOPERATIVE REPORTS

Coop Report No.	Title	Author/s	Date
1	Predicting green crown height in Douglas-fir in New Zealand	I.P. McInnes	Feb 1994
2	Monthly basal area growth distribution of Douglas-fir in New Zealand	I.P. McInnes	Feb 1994
3	Selection and seed collection for the NZ breeding population of Douglas-fir from stock in California and Oregon	C.B. Low/ M.A. Miller	Feb 1994
4	Establishment of a replicated pruning and thinning trial in Douglas-fir at Kaingaroa	I.P. McInnes	Feb 1994
5	Effects of interspecific plant competition on Douglas-fir growth and survival	B. Richardson	March 1994
6	Herbicides for controlling weeds in Douglas-fir plantations	N. Davenhill	March 1994
7	Drying of Douglas-fir clearwood	I.G. Simpson A.N. Haslett	May 1994
8	Douglas-fir clones in Waikuku seed orchard Part 1: Flushing order Part 2: Health assessment	C.B. Low T.G. Vincent S. van Ballekom	June 1994
9	Review of Douglas-fir ( <i>Pseudotsuga menziesii</i> ) nutrition in New Zealand	T.W. Payn J.A.C. Hunter-Smith	Aug 1994
10	Wood properties of Douglas-fir from four stands in Kaingaroa	R.B. McKinley D.L. McConchie M.J.F. Lausberg K.F. Gilchrist C.R. Treloar	Feb 1995
11	A mortality function for Douglas-fir up to stand age 30 years	M.H. Middlemiss R.L. Knowles	Feb 1995
12	Douglas-fir Breeding Plan	C.J.A. Shelbourne	Feb 1995
13	Grade recovery and conversion from a Douglas-fir sawing study at Kaingaroa	D.L. McConchie J. Barbour R.B. McKinley M.O. Kimberley K.F. Gilchrist D.J. Cown	Feb 1995

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14	Machining and related characteristics of New Zealand-grown Douglas-fir compared with radiata pine and North American-grown Douglas-fir	J.C.P. Turner K.F. Gilchrist	June 1995
15	Sawing study and AUTOSAW applications on pruned Douglas-fir logs	Steve Gatenby Alan Somerville	June 1995
16	Effects of fertiliser additions on the growth of young Douglas-fir - trial establishment report	T.W. Payn J.D. Graham	Jan 1996
17	Simulations of timber grade recovery from pruned Douglas-fir logs using AUTOSAW	C.L. Todoroki I.P. McInnes	Feb 1996
18	Control pollination of NZ Douglas-fir clones for GCA testing and breeding population establishment	C.B. Low	Feb 1996
19	Douglas-fir breeding at Cowichan Lake Research Station, Vancouver Island, British Columbia	M. Miller	July 1996
20	Establishment report for the 1996 Douglas-fir progeny tests at three sites.	G.T. Stovold	Jan 1997
21	Establishment report for the 1996 Douglas-fir seed source trials at seven sites.	G.T. Stovold	Jan 1997
22	An evaluation of the relationships between Douglas-fir growth, foliar nutrition, and site variables in a series of permanent sample plots in Otago/Southland	T.W. Payn C.J. Anderson J.D. Graham	Feb 1997
23	Nursery assessment of Douglas-fir Progenies and seed sources from USA and NZ	C.B. Low M.A. Miller	Feb 1997
24	Establishment of new series of Douglas-fir thinning trials	I.P. McInnes	Jan 1998
25	Britain and France Douglas-fir Forestry Study Tour 1997	M. Belton	June 1998
26	Frost damage in Douglas-fir provenances at age two years at Waipori forest (Dunedin)	C.B. Low M.A. Miller	Feb 2000
27	Trial establishment report of 1999 farm field test of Douglas-fir production population candidates	D. Maika	Feb 2000
28	Early growth and form of coastal provenances and progenies of Douglas-fir at three sites in New Zealand	C.B. Low N.J. Ledgard C.J.A. Shelbourne	Feb 2002
29	A User's guide to the Douglas-fir calculator	L. Knowles M. Kimberley L. Wichmann	Feb 2003

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30	A stool-plant management system for the production of non-plagiotropic cuttings of Douglas-fir	T. Faulds C.B. Low J. Aimers-Halliday L.D. Gea	Feb 2003
31	Susceptibility of Douglas-fir provenances to Swiss Needle-Cast disease in New Zealand	I.A. Hood M.O. Kimberley	Feb 2003
32	Foliage sampling protocols for Douglas-fir in New Zealand	J.D. Graham M.O. Kimberley	Feb 2003
33	Modelling within-tree and between-tree variation in Douglas-fir wood properties	L. Knowles M. Kimberley D. Gaunt L. Hansen G. Downes	Feb 2003
34	The effect of provenance on bark thickness of Douglas-fir	H. McConnon L. Knowles	Feb 2003
35	Evaluation of non-destructive methods for assessing stiffness of Douglas-fir trees	R.L. Knowles L. Wichmann-Hansen A. Wedding G. Downes	December 2003
36	Comparative moisture uptake of New Zealand grown Douglas-fir and radiata pine structural timber when exposed to rain-wetting	M. Hedley G. Durbin L. Wichmann-Hansen R.L. Knowles	February 2004
37	Estimating individual tree stiffness using small clears	L. Wichmann-Hansen R.L. Knowles G.B. Walford	February 2004
38	An assessment of Swiss Neelecast on a Douglas-fir provenance and progeny trial at age seven years	C. Low	February 2004
39	A revised breeding strategy for Douglas-fir in New Zealand	C.J.A. Shelbourne C.B. Low	August 2004
40	Development of new stand-level height/age curves for Douglas-fir in New Zealand	M. van der Colff R.L. Knowles	September 2004
41	Application of the New Zealand Douglas-fir silvicultural growth model (DF NAT) to data from the Pacific Northwest	R.L. Knowles L. Wichmann-Hansen	September 2004
42	Functions contained in the Douglas-fir Calculator Version 2	R.L. Knowles L. Wichmann-Hansen M. Kimberley	September 2004
43	Validation of the New Zealand Douglas-fir growth model (DF NAT) using data from southwest Germany	I. Bromley R.L. Knowles	February 2005

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44	Development of a productivity index for Douglas-fir	R.L. Knowles	February 2005
45	Individual-tree-level growth models for Douglas-fir in New Zealand	M. van der Colff B. Shula	February 2006
46	FR257 Douglas-fir nutrition trial: Foliar nutrient levels and growth effects four years after fertilising	J.D. Graham M.O. Kimberley	February 2005
47	Comparison of the water absorbency of Douglas-fir and radiata pine framing timber	J. Turner S. Riley N. Haque C. Cown	June 2005
48	Volume functions for Douglas-fir	M. Watts R.L. Knowles M.O. Kimberley	February 2006
49	Eight year performance of provenances and New Zealand seed sources of Douglas-fir on higher altitude sites in the South Island	C.B. Low C.J.A. Shelbourne D.G. Henley	February 2006
50	Douglas-fir wilding spread and mitigation of risk	N. Ledgard	February 2006
51	Continuous-cover forestry with Douglas-fir	P. Maclaren R.L. Knowles N. Ledgard	July 2006
52	Effects of topographic position on growth and form of Douglas-fir trees	J. Moore N. Ledgard R.L. Knowles	July 2006
53	Comparative study of stability between New Zealand grown Douglas-fir and radiata pine structural timber when subjected to moisture cycling	J. Turner B. Penellum M. Kimberley D. Gaunt	February 2007
54	Validation of the New Zealand National Douglas-fir growth model (DF NAT)	R.L. Knowles L. Wichmann-Hansen	February 2007
55	A new mortality function for New Zealand Douglas-fir	M.O. Kimberley R.L. Knowles	February 2007
56	The 1959 provenance trials – results to age 47 years	M.O. Kimberley R.L. Knowles	February 2007
57	Assessment of acoustic tools to measure the stiffness of standing trees, logs and timber of New Zealand-grown Douglas-fir	R.L. Knowles J. Lee D. Gaunt L. Wichmann Hansen	February 2007
58	How heritable is growth, branch score and sonic velocity in Douglas-fir?	H.S. Dungey C.B. Low L.D. Gea J. Lee	February 2007

59	Distribution of Swiss Needle Cast in New Zealand in relation to winter temperature	J.K. Stone I.A. Hood M.S. Watt J.L. Kerrigan T. Ramsfield	February 2007
60	Douglas-fir vegetative propagation – results to 2006	C.B. Low M.J. Dibley	February 2007