

ID	Province	Study site	Latitude	Longitude	Altitude	Aspect	Slope	Origin	MAT	MAP	Age	Height	DBH	V _{tree}	V _{stand}	Density	Area	Plot	Year	Reference
1	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	549	SU	7	Planted	-5.0	455	1	0.26	0.41 ^B	NA	NA	NA	600	1	2012	Han et al., 2015b
2	Heilongjiang	Xinlin Forest Bureau	51°40'N	124°24'E	538	NA	NA	Planted	-3.4	508	1	0.40	NA	NA	NA	3300 ^{P/}	600	3	2009	Huang, 2011; Yang et al., 2002*
3	Heilongjiang	Yongcui Forest Farm	47°05'N	128°58'E	224	NA	5-10	Planted	-0.3	575	1	0.42	0.60 ^B	NA	NA	3045 [/]	NA	NA	1983	Liu & Deng, 2007; Zhang, 2008b*
4	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	1	0.38	0.51 ^B	NA	NA	2667 ^{P/}	150	3	1982	Liu et al., 1989; Liu et al., 1990b*
5	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	1	0.40	0.50 ^B	NA	NA	NA	NA	NA	1984	Song et al., 1992; Song et al., 1996*
6	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	1	0.24	0.30 ^B	NA	NA	NA	NA	6	1984	Song et al., 1996
7	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	1	0.33	0.40 ^B	NA	NA	NA	NA	6	1984	Song et al., 1996
8	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	1	0.31	0.34 ^B	NA	NA	NA	NA	6	1984	Song et al., 1996
9	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	1	0.36	0.35 ^B	NA	NA	NA	NA	6	1984	Song et al., 1996
10	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	1	0.38	0.35 ^B	NA	NA	NA	NA	6	1984	Song et al., 1996
11	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	1	0.39	0.50 ^B	NA	NA	NA	NA	6	1984	Song et al., 1996
12	Heilongjiang	Tieli Forest Bureau	47°20'N	128°05'E	300	NA	<15	Planted	1.0	646	1	0.54	1.10 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
13	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	<15	Planted	1.0	646	1	0.53	0.99 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
14	Heilongjiang	Jinshantun Forest Bureau	47°24'N	129°26'E	298	NA	<15	Planted	1.0	646	1	0.52	0.96 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
15	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	NA	<15	Planted	1.0	646	1	0.52	0.78 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
16	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	SH	9	Planted	1.0	636	1	0.61	NA	NA	NA	4400 ^{P/}	4000	1	1990	Wang et al., 2000b
17	Heilongjiang	Wuying Forest Bureau	48°11'N	129°04'E	350	HSH	5	Planted	0.3	600	1	0.59	NA	NA	NA	4400 ^{P/}	4000	2	1990	Wang et al., 2000b
18	Heilongjiang	Liangshui Nature Reserve	47°10'N	128°53'E	500	SU	10-15	Planted	0.5	611	1	0.43	NA	NA	NA	2667 ^{P/}	375	5	1982	Yu & Yang, 1988
19	Heilongjiang	Zizhi Forest Farm	48°00'N	126°42'E	260	NA	NA	Planted	0.2	524	1	0.40	NA	NA	NA	NA	NA	4	2007	Yu & Yuan, 2009
20	Heilongjiang	Qingshan Forest Farm	44°39'N	129°33'E	400	NA	NA	Planted	2.6	520	1	0.50	NA	NA	NA	NA	NA	4	2007	Yu & Yuan, 2009
21	Heilongjiang	Maorshan Forest Farm	45°24'N	127°39'E	400	NA	NA	Planted	2.6	580	2	1.31	1.60 ^B	NA	NA	NA	NA	3	1977	LFTB, 1979; Yang & Shang, 1983
22	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	2	0.56	NA	NA	NA	2667 ^{P/}	150	5	1984	Liu et al., 1990b
23	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	2	0.61	NA	NA	NA	2667 ^{P/}	150	3	1983	Liu et al., 1990b
24	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	2	0.95	1.10 ^B	NA	NA	NA	NA	NA	1985	Song et al., 1992; Song et al., 1996*
25	Heilongjiang	Tieli Forest Bureau	47°20'N	128°05'E	300	NA	<15	Planted	1.0	646	2	0.73	1.80 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
26	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	<15	Planted	1.0	646	2	0.70	1.50 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
27	Heilongjiang	Jinshantun Forest Bureau	47°24'N	129°26'E	298	NA	<15	Planted	1.0	646	2	0.69	1.50 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
28	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	NA	<15	Planted	1.0	646	2	0.68	0.96 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
29	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	SH	9	Planted	1.0	636	2	1.08	NA	NA	NA	4400 ^{P/}	4000	1	1991	Wang et al., 2000b

30	Heilongjiang	Wuying Forest Bureau	48°11'N	129°04'E	350	HSH	5	Planted	0.3	600	2	0.95	NA	NA	NA	4400 ^{P/}	4000	2	1991	Wang et al., 2000b
31	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	585	HSU	10	Planted	-5	455	3	0.40	0.56 ^B	NA	NA	NA	600	1	2012	Han et al., 2015b
32	Heilongjiang	Yongcui Forest Farm	47°05'N	128°58'E	224	NA	5-10	Planted	-0.3	575	3	1.56	1.50 ^B	NA	NA	2730/	NA	NA	1985	Liu & Deng, 2007; Zhang, 2008b*
33	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	3	1.01	NA	NA	NA	2667 ^{P/}	150	3	1984	Liu et al., 1990b
34	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	3	1.02	NA	NA	NA	2667 ^{P/}	150	5	1985	Liu et al., 1990b
35	Heilongjiang	Qingshan Forest Farm	44°39'N	129°33'E	400	NA	NA	Planted	2.6	520	3	1.18	NA	NA	NA	3333 ^{P/}	210	4	2009	Ma et al., 2012; Yu & Yuan, 2009*
36	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	3	1.52	1.70 ^B	NA	NA	NA	NA	NA	1986	Song et al., 1992; Song et al., 1996*
37	Liaoning	Dagujia Forest Farm	42°45'N	125°48'E	400	HSH	24	Planted	6.0	650	3	1.03	NA	NA	NA	2500 ^{P/}	450	1	1979	Sun et al., 2008
38	Heilongjiang	Tieli Forest Bureau	47°20'N	128°05'E	300	NA	<15	Planted	1.0	646	3	1.35	2.60 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
39	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	<15	Planted	1.0	646	3	1.29	2.20 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
40	Heilongjiang	Jinshantun Forest Bureau	47°24'N	129°26'E	298	NA	<15	Planted	1.0	646	3	1.28	2.10 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
41	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	NA	<15	Planted	1.0	646	3	1.20	1.50 ^B	NA	NA	NA	NA	NA	NA	Wang et al., 2000a
42	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	SH	9	Planted	1.0	636	3	1.71	NA	NA	NA	4400 ^{P/}	4000	1	1992	Wang et al., 2000b
43	Heilongjiang	Wuying Forest Bureau	48°11'N	129°04'E	350	HSH	5	Planted	0.3	600	3	1.54	NA	NA	NA	4400 ^{P/}	4000	2	1992	Wang et al., 2000b
44	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°10'E	430	NA	NA	Planted	-1.3	500	3	1.03	1.45 ^B	NA	NA	3333 ^{P/}	NA	3	1994	Xu & Zhou, 1996; Liu et al., 1990b*
45	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	NA	NA	Planted	-1.3	500	3	1.09	NA	NA	NA	2500 ^{P/}	80	5	2005	Yang et al., 2006; Liu et al., 1990b*
46	Heilongjiang	Liangshui Nature Reserve	47°10'N	128°53'E	500	SU	10-15	Planted	0.5	611	3	0.96	NA	NA	NA	2667 ^{P/}	375	5	1984	Yu & Yang, 1988
47	Heilongjiang	Yongxing Forest Farm	46°42'N	133°42'E	540	HSU	6-8	Planted	1.8	566	4	1.51	NA	NA	NA	2667 ^{P/}	375	5	1986	Chen, 1989
48	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	4	1.59	NA	NA	NA	2667 ^{P/}	150	3	1985	Liu et al., 1990b
49	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	4	1.66	NA	NA	NA	2667 ^{P/}	150	5	1986	Liu et al., 1990b
50	Heilongjiang	Qingshan Forest Farm	44°39'N	129°33'E	400	NA	NA	Planted	2.6	520	4	1.63	0.75	0.05 ^E	NA	3333 ^{P/}	210	4	2010	Ma et al., 2012; Yu & Yuan, 2009*
51	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	4	1.95	0.70	0.06 ^E	NA	NA	NA	NA	1987	Song et al., 1992; Song et al., 1996*
52	Heilongjiang	Tieli Forest Bureau	47°20'N	128°05'E	300	NA	<15	Planted	1.0	646	4	2.25	1.85	0.38 ^E	NA	NA	NA	NA	NA	Wang et al., 2000a
53	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	<15	Planted	1.0	646	4	2.18	1.44	0.23 ^E	NA	NA	NA	NA	NA	Wang et al., 2000a
54	Heilongjiang	Jinshantun Forest Bureau	47°24'N	129°26'E	298	NA	<15	Planted	1.0	646	4	2.10	1.13	0.15 ^E	NA	NA	NA	NA	NA	Wang et al., 2000a
55	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	NA	<15	Planted	1.0	646	4	1.96	0.84	0.08 ^E	NA	NA	NA	NA	NA	Wang et al., 2000a
56	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	SH	9	Planted	1.0	636	4	2.62	NA	NA	NA	4400 ^{P/}	4000	1	1993	Wang et al., 2000b
57	Heilongjiang	Wuying Forest Bureau	48°11'N	129°04'E	350	HSH	5	Planted	0.3	600	4	2.25	NA	NA	NA	4400 ^{P/}	4000	2	1993	Wang et al., 2000b
58	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	537	SU	3	Planted	-5.0	455	4	1.30	1.29 ^B	NA	NA	2500 ^{P/}	600	3	2013	Wang et al., 2014; 2015a
59	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°10'E	430	SH,HSH	<5	Planted	-1.3	500	4	1.34	2.78 ^B	NA	NA	3333 ^{P/}	NA	3	1994	Xu & Zhou, 1996; Liu et al., 1990b*

60	Heilongjiang	Dongfanghong Forest Farm	46°57'N	129°10'E	269	SU	12	Planted	1.4	661	4	NA	0.92	0.17 ^E	0.43 ^E	2500/	NA	NA	NA	Xu et al., 2011b; Huang et al., 2011a; Zhang, 2010*
61	Heilongjiang	Dongfanghong Forest Farm	46°57'N	129°10'E	269	SU	5	Planted	1.4	661	4	NA	1.52	0.48 ^E	1.21 ^E	2500/	NA	NA	NA	Xu et al., 2011b; Huang et al., 2011a; Zhang, 2010*
62	Heilongjiang	Jiulian Forest Farm	47°20'N	128°05'E	300	HSH	15	Planted	1.3	660	4	NA	1.60	0.54 ^E	1.89 ^E	3500/	NA	NA	NA	Xu et al., 2011b; Zhang, 2011*
63	Heilongjiang	Jiulian Forest Farm	47°20'N	128°05'E	300	HSH	8	Planted	1.3	660	4	NA	2.24	1.13 ^E	3.94 ^E	3500/	NA	NA	NA	Xu et al., 2011b; Zhang, 2011*
64	Heilongjiang	Yongxing Forest Farm	46°42'N	133°42'E	540	HSU	6-8	Planted	1.8	566	5	2.24	NA	NA	NA	2667 ^{P/}	375	5	1987	Chen, 1989
65	Heilongjiang	Fenglin Forest Farm	47°16'N	128°38'E	249	NA	NA	Planted	1.4	641	5	3.21	2.16	0.74 ^E	NA	3333 ^{P/}	180	4	2011	Han et al., 2012a; Zhang, 2011*
66	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	5	2.24	1.04	0.14 ^E	NA	2667 ^{P/}	150	3	1986	Liu et al., 1990b
67	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	5	2.45	1.17	0.18 ^E	NA	2667 ^{P/}	150	5	1987	Liu et al., 1990b
68	Heilongjiang	Qingshan Forest Farm	44°39'N	129°33'E	400	NA	NA	Planted	2.6	520	5	2.62	1.44	0.29 ^E	NA	3333 ^{P/}	210	4	2011	Ma et al., 2012; Yu & Yuan, 2009*
69	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	5	2.60	1.40	0.27 ^E	NA	NA	NA	NA	1988	Song et al., 1992; Song et al., 1996*
70	Inner Mongolia	Wangyedian Forest Farm	41°37'N	118°16'E	1240	HSH	18	Planted	4.2	521	5	1.80	0.70	0.05 ^E	0.07 ^E	1335/	240	NA	1989	Sun & Sun, 1992
71	Heilongjiang	Tieli Forest Bureau	47°20'N	128°05'E	300	NA	<15	Planted	1.0	646	5	3.23	2.48	0.95 ^E	NA	NA	NA	NA	NA	Wang et al., 2000a
72	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	<15	Planted	1.0	646	5	2.97	1.94	0.56 ^E	NA	NA	NA	NA	NA	Wang et al., 2000a
73	Heilongjiang	Jinshantun Forest Bureau	47°24'N	129°26'E	298	NA	<15	Planted	1.0	646	5	2.89	1.76	0.46 ^E	NA	NA	NA	NA	NA	Wang et al., 2000a
74	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	NA	<15	Planted	1.0	646	5	2.66	1.43	0.29 ^E	NA	NA	NA	NA	NA	Wang et al., 2000a
75	Heilongjiang	Meixi Forest Bureau	47°44'N	128°55'E	300	SH	9	Planted	1.0	636	5	3.71	NA	NA	NA	4400 ^{P/}	4000	1	1994	Wang et al., 2000b
76	Heilongjiang	Wuying Forest Bureau	48°11'N	129°04'E	350	HSH	5	Planted	0.3	600	5	2.99	NA	NA	NA	4400 ^{P/}	4000	2	1994	Wang et al., 2000b
77	Heilongjiang	Liangshui Nature Reserve	47°10'N	128°53'E	500	NA	NA	Planted	-0.3	575	5	2.35	NA	NA	NA	2667 ^{P/}	375	5	1987	Yang, 2009; Zhang, 2008b*
78	Heilongjiang	Changqing Forest Farm	45°53'N	130°45'E	300	NA	NA	Planted	1.8	725	5	2.07	NA	NA	NA	2667 ^{P/}	375	5	1987	Yang & Guo, 1990
79	Inner Mongolia	Mangui Forest Bureau	52°03'N	122°11'E	670	HSU	8	Planted	-5.8	481	5	0.72	NA	NA	NA	2667 ^{P/}	375	5	1987	Zhan & Yang, 1989
80	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	HSH	10-15	Planted	-0.3	575	5	3.06	3.42 ^B	NA	NA	4444 ^{P/}	NA	NA	2004	Zhang, 2008b; Huo, 2007
81	Heilongjiang	Sunwu County	49°13'N	127°12'E	234	NA	NA	Planted	-1.6	551	5	2.99	4.36 ^B	NA	NA	4444 ^{P/}	NA	NA	2004	Zhang, 2008b; Huo, 2007
82	Heilongjiang	Songling Forest Bureau	50°43'N	124°25'E	420	NA	NA	Planted	-3.0	508	5	1.72	2.62 ^B	NA	NA	4444 ^{P/}	NA	NA	2004	Zhang, 2008b; Huo, 2007
83	Heilongjiang	Tahe Forest Bureau	52°31'N	124°39'E	362	NA	NA	Planted	-2.7	488	5	0.77	1.17 ^B	NA	NA	4444 ^{P/}	NA	NA	2004	Zhang, 2008b; Huo, 2007
84	Heilongjiang	Liangshui Nature Reserve	47°08'N	129°02'E	485	NA	NA	Planted	-0.3	575	5	3.63	2.15	0.85 ^E	NA	NA	NA	NA	1963	Zhou et al., 1965; Zhang, 2008b*
85	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	6	3.06	2.20	0.73 ^E	NA	2667 ^{P/}	150	5	1988	Liu et al., 1990b
86	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	400	HSH	<5	Planted	-1.3	500	6	3.06	2.08	0.66 ^E	NA	2667 ^{P/}	150	3	1987	Liu et al., 1990b
87	Heilongjiang	Songling Forest Bureau	50°41'N	124°21'E	420	NA	NA	Planted	-1.2	450	6	3.35	2.36	0.47	NA	NA	NA	NA	1989	Song et al., 1992; Song et al., 1996*
88	Heilongjiang	Huanan Forest Bureau	46°12'N	130°31'E	300	NA	NA	Planted	1.8	725	6	2.00	NA	NA	NA	2667 ^{P/}	375	5	1988	Yang, 2009; Yang et al., 1991; Yang & Guo, 1990*
89	Heilongjiang	Yongxing Forest Farm	46°42'N	133°42'E	540	NA	NA	Planted	1.8	566	6	3.20	NA	NA	NA	2667 ^{P/}	375	5	1988	Yang, 2009; Chen, 1989*

120	Heilongjiang	Taergen Forest Farm	52°14'N	124°44'E	571	NA	NA	Planted	-3.4	508	9	2.27	1.67	0.32 ^E	1.16 ^E	3650/	600	3	2009	Huang, 2011; Yang et al., 2002*
121	Heilongjiang	Yongcui Forest Farm	47°05'N	128°58'E	224	NA	5-10	Planted	-0.3	575	9	5.50	4.50	7.10	17.04	2400/	NA	NA	1991	Liu & Deng, 2007; Zhang, 2008b*
122	Heilongjiang	Dailing Forest Bureau	47°08'N	129°06'E	280	NA	NA	Planted	0.5	727	9	3.90	3.40	2.06 ^E	NA	NA	NA	NA	NA	Wang, 1992
123	Heilongjiang	Dailing Forest Bureau	47°08'N	129°06'E	280	NA	NA	Planted	0.5	727	9	5.70	5.30	6.96 ^E	NA	NA	NA	NA	NA	Wang, 1992
124	Jilin	Qingshan Forest Bureau	42°00'N	128°45'E	736	HSH	8-10	Planted	5.0	500	9	4.60	4.50	4.08 ^E	NA	NA	NA	≥2	NA	Wang, 1992 ; Liu & Xu,1984; Wang, 1992*
125	Heilongjiang	Maorshan Forest Farm	45°24'N	127°39'E	400	SU	3-5	Planted	2.6	580	9	3.35	2.85	1.40	4.50	3213/	NA	3	1982	Yang & Shang, 1983
126	Heilongjiang	Tahe Forest Bureau	52°31'N	124°39'E	450	NA	NA	Planted	-2.7	488	10	1.50	0.70	0.04 ^E	0.20 ^E	4725/	600	3	2009	Huang, 2011; Yang et al., 2002*
127	Heilongjiang	Xiufeng County	52°29'N	124°36'E	450	NA	NA	Planted	-2.7	488	10	2.50	2.20	0.58 ^E	1.52 ^E	2650/	600	3	2009	Huang et al., 2011b; Yang et al., 2002*
128	Heilongjiang	Huzhong Forest Bureau	51°50'N	123°30'E	812	NA	<5	Planted	-4.4	482	10	3.31	4.82	3.16 ^E	6.85 ^E	2167/	400	3	2009	Qi et al., 2011; 2013; Hu et al., 2012*
129	Heilongjiang	Maorshan Ecological Station	45°16'N	127°34'E	300	NA	7	Planted	2.8	723	11	6.91	6.72	14.60	64.88	4444/	1000	1	1997	Chen et al., 2012b; Li & Chen, 2004
130	Heilongjiang	Xinlin Forest Bureau	51°42'N	124°20'E	525	NA	NA	Planted	-3.4	508	11	3.57	3.25	1.72 ^E	4.22 ^E	2450/	600	3	2009	Huang, 2011; Yang et al., 2002*
131	Heilongjiang	Xinlin Forest Bureau	51°42'N	124°20'E	526	NA	NA	Planted	-3.4	508	11	2.79	1.95	0.53 ^E	1.06 ^E	2014/	600	3	2009	Huang et al., 2011b; Yang et al., 2002*
132	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	FL	0	Planted	-0.3	575	11	8.08	8.70	26.10	57.42	2200/	NA	NA	1963	Liu, 1984; Zhang, 2008b*
133	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	FL	0	Planted	-0.3	575	11	8.10	9.10	28.43	62.55	2200/	NA	NA	1963	Liu, 1984; Zhang, 2008b*
134	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	FL	0	Planted	-0.3	575	11	8.20	9.25	28.16	61.95	2200/	NA	NA	1963	Liu, 1984; Zhang, 2008b*
135	Heilongjiang	Beiji Village	53°27'N	122°21'E	400	SU	16	Natural	-5.4	500	11	6.40	8.60	18.64 ^E	16.70 ^E	896/0.68	600	3	2009	Xu et al., 2011a; 2013
136	Heilongjiang	Beiji Village	53°27'N	122°21'E	400	SH	5	Natural	-5.4	500	11	7.30	6.70	13.98 ^E	23.99 ^E	1716/0.73	600	3	2009	Xu et al., 2011a; 2013
137	Heilongjiang	Liangshui Nature Reserve	47°08'N	129°02'E	485	NA	NA	Planted	-0.3	575	11	7.00	6.80	13.67 ^E	34.18 ^E	2500/	70	1	NA	Zhou et al., 1965; Zhang, 2008b*
138	Heilongjiang	Liangshui Nature Reserve	47°08'N	129°02'E	485	NA	NA	Planted	-0.3	575	11	7.43	7.20	16.19 ^E	43.71 ^E	2700/	100	1	NA	Zhou et al., 1965; Zhang, 2008b*
139	Heilongjiang	Liangshui Nature Reserve	47°08'N	129°02'E	485	NA	NA	Planted	-0.3	575	11	7.70	6.00	12.24 ^E	46.52 ^E	3800/	50	1	NA	Zhou et al., 1965; Zhang, 2008b*
140	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	581	HSU	20	Planted	-5.0	455	12	2.02	3.03	0.79 ^E	NA	/0.30	600	1	2011	Han et al., 2012b; 2015
141	Heilongjiang	Tahe Forest Bureau	52°31'N	124°39'E	487	NA	NA	Planted	-2.7	488	12	1.15	0.60 ^B	NA	NA	5250/	600	3	2009	Huang, 2011; Yang et al., 2002*
142	Heilongjiang	Xiufeng County	52°29'N	124°36'E	487	NA	NA	Planted	-2.7	488	12	2.02	1.13	0.14 ^E	0.35 ^E	2500/	600	3	2009	Huang et al., 2011b; Yang et al., 2002*
143	Inner Mongolia	Wangyedian Forest Farm	41°24'N	118°17'E	1220	HSU	6	Planted	4.2	521	12	5.10	6.50	8.77 ^E	10.22 ^E	1165/	60	1	1988	Sun & Sun, 1992; Sun et al., 1991
144	Heilongjiang	Haerbin City	46°50'N	126°20'E	172	NA	NA	Planted	3.2	572	12	6.14	7.47	17.10	NA	NA	NA	NA	NA	Zhao et al., 1992; Wang, 1992*
145	Heilongjiang	Maorshan Forest Farm	45°23'N	127°32'E	300	NA	NA	Planted	2.7	729	13	8.70	8.20	24.40 ^E	80.51 ^E	3300/1.00	NA	1	1994	Cui et al., 2000
146	Heilongjiang	Jiagedaqi Forest Bureau	50°24'N	124°07'E	430	NA	NA	Planted	-1.3	500	13	7.75	8.11	20.95 ^E	42.21 ^E	2015/	600	3	2009	Huang et al., 2011b; Liu et al., 1990b*
147	Heilongjiang	Mohe County	52°58'N	122°31'E	375	NA	NA	Planted	-4.3	430	13	3.85	3.92	2.61 ^E	6.89 ^E	2640/	600	3	2009	Huang et al., 2011b; Sun et al., 2012*
148	Liaoning	Dagujia Forest Farm	42°45'N	125°48'E	400	HSH	NA	Planted	6.0	650	13	5.74	4.53	5.34	17.08	3200/0.80	NA	NA	1998	Meng et al., 2000; Sun et al., 2008*
149	Heilongjiang	Tongtianyi Forest Farm	45°42'N	130°33'E	264	NA	NA	Planted	3.5	656	13	9.30	8.00	25.22 ^E	NA	NA	NA	NA	NA	Wang, 1992

150	Liaoning	Caohekou Forest Farm	40°53'N	123°51'E	235	HSU	13	Planted	6.1	926	13	7.32	6.43	13.04 ^E	30.18 ^E	2314/	600	3	2014	Wang, 2015
151	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	13	12.40	12.40	75.87 ^E	58.19 ^E	767/	600	1	2011	Zhu et al., 2013; Zhu, 2013
152	Inner Mongolia	Aershan Forest Bureau	47°30'N	120°15'E	954	HSH	6-15	Planted	-3.3	425	14	5.30	8.00	13.21 ^E	NA	/0.80	600	3	NA	Chen & Xiao, 2006
153	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	14	NA	8.90	36.18	109.99	3040/	1000	1	1971	Ding, 1988; Chen et al., 1994
154	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	14	NA	8.30	37.19	126.60	3404/	1000	1	1971	Ding, 1988; Chen et al., 1994
155	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	14	NA	8.27	30.85	111.05	3600/	1000	1	1971	Ding, 1988; Chen et al., 1994
156	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	14	NA	8.40	31.85	127.55	4005/	1000	1	1971	Ding, 1988; Chen et al., 1994
157	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	14	NA	NA	33.97	124.72	3672/	1000	1	1971	Ding, 1988; Chen et al., 1994
158	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	14	8.14	8.22	34.70	106.70	3075/0.90	NA	1	1979	Dong, 2001; 2008; Li, 1993; Wu, 2015*
159	Heilongjiang	Mohe County	52°58'N	122°31'E	486	NA	NA	Planted	-4.3	430	14	8.26	6.58	15.61 ^E	58.92 ^E	3775/	600	3	2009	Huang, 2011; Sun et al., 2012*
160	Heilongjiang	Maorshan Forest Farm	45°16'N	127°34'E	295	FL	0	Planted	2.5	724	14	12.00	10.00	50.05 ^E	NA	/0.70	NA	NA	1981	Ma, 1983
161	Heilongjiang	Maorshan Forest Farm	45°16'N	127°34'E	310	SU	NA	Planted	2.5	724	14	13.00	10.00	54.88 ^E	NA	/0.60	NA	NA	1981	Ma, 1983
162	Heilongjiang	Nehe County	47°58'N	124°22'E	170	NA	NA	Planted	2.0	427	14	8.60	6.70	16.88 ^E	NA	NA	NA	NA	NA	Mao et al., 1998
163	Inner Mongolia	Wangyedian Forest Farm	41°37'N	118°12'E	1220	HSU	7	Planted	4.2	521	14	8.20	7.60	19.94 ^E	99.70 ^E	5000/	160	1	1988	Sun & Sun, 1992
164	Jilin	Xujiadong Forest Farm	42°16'N	128°41'E	800	FL	0	Planted	5.0	500	14	NA	9.00	37.08	69.84	1883/	600	1	2002	Wang et al., 2013a; Wang, 1992*
165	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	544	HSU	5	Planted	-5	455	14	3.40	2.68	1.16 ^E	NA	2500 ^P /0.20	600	3	2013	Wang et al., 2014; 2015a
166	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	NA	NA	Planted	2.8	724	14	11.52	12.10	66.10	NA	NA	NA	3	1989	Yang et al., 1992; Ding, 1988*
167	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	15	8.58	9.13	29.00 ^E	89.18 ^E	3075/	NA	1	1980	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
168	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	543	SU	16	Planted	-5.0	455	15	2.52	4.06	1.71 ^E	8.38	/0.30	600	1	2011	Han et al., 2012b; 2015
169	Heilongjiang	Mohe County	52°58'N	122°31'E	477	NA	NA	Planted	-4.3	430	15	7.87	8.07	21.14 ^E	52.31 ^E	2475/	600	3	2009	Huang, 2011; Sun et al., 2012*
170	Heilongjiang	Huzhong Forest Bureau	51°50'N	123°30'E	812	NA	<5	Planted	-4.4	482	15	6.70	7.86	16.77 ^E	21.80 ^E	1300/	400	3	2009	Qi et al., 2011; 2013; Hu et al., 2012*
171	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	15	NA	NA	53.23	107.80	2025/	NA	NA	1973	Tang et al., 2009
172	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	15	NA	NA	33.15	136.80	4127/	NA	NA	1973	Tang et al., 2009
173	Jilin	Jilin City	43°40'N	126°40'E	540	HSH	11	Planted	4.3	835	15	8.50	7.75	28.20	67.68	2400/	70	5	1994	Wang, 1995
174	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	NA	<15	Planted	-1.5	386	15	6.80	7.72	16.53 ^E	60.87	2700 ^P /	NA	NA	NA	Wang, 2000; Ren, 2010; Wu, 2015*
175	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	NA	<15	Planted	-1.5	386	15	6.10	6.90	11.97 ^E	52.99	2700 ^P /	NA	NA	NA	Wang, 2000; Ren, 2010; Wu, 2015*
176	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	SU	26-35	Planted	-1.5	386	15	5.60	6.57	9.96 ^E	47.03	2700 ^P /	NA	NA	NA	Wang, 2000; Ren, 2010; Wu, 2015*
177	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	NA	NA	Planted	-1.5	386	15	5.20	4.80	5.27 ^E	32.60	2700 ^P /	NA	NA	NA	Wang, 2000; Ren, 2010; Wu, 2015*
178	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	15	12.40	10.80	56.78	116.40	2050/0.90	NA	NA	1973	Xu et al., 2011b; Huang et al., 2011a; Zhang, 2010*
179	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	15	12.80	10.60	56.93	146.30	2570/1.00	NA	NA	1973	Xu et al., 2011b; Huang et al., 2011a; Zhang, 2010*

180	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	15	12.50	8.10	33.10	136.60	4127/1.00	NA	NA	1973	Xu et al., 2011b; Huang et al., 2011a; Zhang, 2010*
181	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	15	11.50	7.10	23.52	132.40	5629/1.00	NA	NA	1973	Xu et al., 2011b; Huang et al., 2011a; Zhang, 2010*
182	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	15	11.40	6.60	20.01	128.00	6397/1.00	NA	NA	1973	Xu et al., 2011b; Huang et al., 2011a; Zhang, 2010*
183	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	NA	NA	Planted	-3.4	462	15	8.40	6.20	10.80	91.80	8500/1.00	NA	NA	1978	Xue, 1993; Ren, 2010; Yang et al., 2002*
184	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	NA	NA	Planted	-3.4	462	15	9.30	7.50	21.10	105.30	4950/1.00	NA	NA	1978	Xue, 1993; Ren, 2010; Yang et al., 2002*
185	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	NA	NA	Planted	-3.4	462	15	9.50	8.80	33.60	129.50	3855/1.00	NA	NA	1978	Xue, 1993; Ren, 2010; Yang et al., 2002*
186	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	NA	NA	Planted	-3.4	462	15	8.50	8.50	33.60	131.90	3925/0.90	NA	NA	1978	Xue, 1993; Ren, 2010; Yang et al., 2002*
187	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	NA	NA	Planted	-3.4	462	15	8.00	8.20	25.40	67.40	2655/0.80	NA	NA	1978	Xue, 1993; Ren, 2010; Yang et al., 2002*
188	Liaoning	Caohekou Forest Farm	40°51'N	123°55'E	300	NA	NA	Planted	6.1	926	15	6.80	8.00	26.33	30.72	1167/	NA	NA	NA	Yao et al., 1989; Li et al., 2007*
189	Liaoning	Huanren County	41°13'N	124°51'E	550	HSU	10	Planted	4.6	900	15	6.80	6.70	17.97	60.63	3375/	667	4	1988	Yao et al., 1989
190	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	15	NA	NA	14.05	52.00	3700/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
191	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	16	8.83	9.61	32.80 ^E	100.86 ^E	3075/	NA	1	1981	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
192	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	HSH	<5	Planted	4.5	450	16	8.40	6.70	12.20	53.70	4400/	NA	1	1979	Fu, 1984; Cao, 2011*
193	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	HSH	<5	Planted	4.5	450	16	8.65	6.30	10.60	51.20	4829/	NA	1	1979	Fu, 1984; Cao, 2011*
194	Heilongjiang	Maorshan Forest Farm	45°23'N	127°32'E	475	HSU	13	Planted	2.8	723	16	11.30	10.86	54.00 ^E	122.42 ^E	2267/	600	3	2001	Li et al., 2010a; Yang et al., 2015
195	Heilongjiang	Aihua Forest Farm	48°13'N	126°08'E	330	HSH	3	Planted	1.1	550	16	8.00	8.60	23.07	47.50	2059/	NA	NA	1995	Mao et al., 1998; Si et al., 1999
196	Heilongjiang	Cuohai Forest Farm	47°27'N	122°51'E	350	HSU	15	Planted	3.4	446	16	9.70	10.80	45.51	30.50	670/	NA	NA	1995	Mao et al., 1998; Si et al., 1999
197	Heilongjiang	Jiagedaqi Forest Bureau	50°10'N	124°05'E	420	HSU	5-10	Planted	-3.0	450	16	10.60	12.50	47.70	94.92	1987/0.80	400	3	2007	Xia et al., 2012
198	Inner Mongolia	Moerdaoga Forest Bureau	51°15'N	120°35'E	900	NA	NA	Natural	-4.5	471	16	5.10	3.50	9.94	132.00	13275/	NA	1	1983	Xue, 1987b; Yang et al., 2002*
199	Inner Mongolia	Ailinyuan Forest Farm	48°23'N	122°02'E	542	SH	8-10	Planted	-3.4	450	16	NA	9.80	44.20	71.60	1620/	NA	NA	1981	Zhou, 1998; Gao et al., 2005*
200	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	575	HSU	5	Planted	-5.0	455	16	4.20	3.38	2.22 ^E	NA	2500 ^P /0.40	600	3	2012	Zou et al., 2013; Xin et al., 2014; Wang et al., 2015a
201	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	17	9.56	9.75	36.86 ^E	113.35 ^E	3075/	NA	1	1982	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
202	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	HSH	<5	Planted	4.5	450	17	8.40	8.40	20.10	62.30	3100/	NA	1	1979	Fu, 1984; Cao, 2011*
203	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	HSH	<5	Planted	4.5	450	17	8.80	8.70	21.80	67.20	3083/	NA	1	1979	Fu, 1984; Cao, 2011*
204	Heilongjiang	Mohe County	52°58'N	122°31'E	465	NA	NA	Planted	-4.3	430	17	3.60	3.31	1.79 ^E	2.65 ^E	1475/	600	3	2009	Huang, 2011; Sun et al., 2012*
205	Heilongjiang	Maorshan Forest Farm	45°20'N	127°34'E	340	NA	NA	Planted	2.8	724	17	10.10	10.20	35.75	54.80	1533/0.75	1000	1	2000	Jiang, 2003; Jiang et al., 2003; 2005
206	Inner Mongolia	Aershan Forest Bureau	47°31'N	120°24'E	934	NA	NA	Planted	-3.2	452	17	8.10	13.40	53.29 ^E	NA	NA	NA	3	2009	Li et al., 2011
207	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	HSU	22-24	Planted	-3.4	462	17	8.20	6.70	19.67	112.90	5739/0.90	NA	NA	1980	Lin, 1981; Yang et al., 2002*
208	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	HSU	22-24	Planted	-3.4	462	17	8.10	9.10	37.89	156.30	4125/1.00	NA	NA	1980	Lin, 1981; Yang et al., 2002*
209	Inner Mongolia	Aershan Forest Bureau	47°30'N	120°15'E	954	HSU	25-30	Planted	-3.3	425	17	8.40	7.60	25.93	55.50	2140/1.00	NA	NA	1980	Lin, 1981; Yang et al., 2002*

210	Inner Mongolia	Kuduer Forest Bureau	50°04'N	121°31'E	862	NA	NA	Planted	-3.3	430	17	5.80	5.90	8.79	56.70	6450/	400	1	NA	Mu & Yan, 1982
211	Heilongjiang	Yilin Forest Farm	52°20'N	122°40'E	950	NA	6	Natural	-2.6	514	17	NA	9.90	42.09 ^E	74.92 ^E	1780/	400	1	NA	Xiao & Yang, 2014
212	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	18	9.93	9.95	39.91 ^E	122.71 ^E	3075/	NA	1	1983	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
213	Heilongjiang	Xinglong Township	51°46'N	125°53'E	368	HSU	5	Natural	-2.4	460	18	9.90	7.90	24.43	87.00	3561/	NA	1	1954	Gu, 1985a; Zhao et al., 1999*
214	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	SH	<15	Planted	4.5	437	18	10.00	8.10	26.00	80.15	3083/	NA	1	NA	Guo et al., 1984; Cao, 2011*
215	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	SH	<15	Planted	4.5	437	18	9.00	6.70	17.00	52.70	3100/	NA	1	NA	Guo et al., 1984; Cao, 2011*
216	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	SH	<15	Planted	4.5	437	18	10.10	8.00	25.00	77.50	3100/	NA	1	NA	Guo et al., 1984; Cao, 2011*
217	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	SH	<15	Planted	4.5	437	18	9.40	6.00	14.00	67.61	4829/	NA	1	NA	Guo et al., 1984; Cao, 2011*
218	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	SH	<15	Planted	4.5	437	18	8.90	6.80	18.00	79.20	4400/	NA	1	NA	Guo et al., 1984; Cao, 2011*
219	Heilongjiang	Maorshan Forest Farm	45°23'N	127°32'E	435	HSH	6	Planted	2.8	723	18	12.10	10.40	54.14 ^E	228.47 ^E	4220/	180	6	2004	Huang, 2006
220	Heilongjiang	Maorshan Forest Farm	45°23'N	127°32'E	500	HSH	10-15	Planted	2.8	723	18	10.30	10.60	46.52 ^E	NA	3333 ^P /	600	3	2003	Jia et al., 2009; Sun, 2010
221	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	650	HSU	5	Natural	-3.0	500	18	10.20	16.53	100.47 ^E	NA	/0.50	600	1	2006	Jiang, 2008; Jiang et al., 2007; Lu et al., 2013*
222	Inner Mongolia	Kuduer Forest Bureau	49°47'N	121°57'E	820	SU	26	Planted	-4.0	500	18	6.40	9.00	37.01	112.70	3045/0.90	NA	NA	1980	Lin, 1981; Yang et al., 2002*
223	Inner Mongolia	Chaocha Forest Farm	50°41'N	121°57'E	950	SU	18	Planted	-5.5	425	18	8.60	8.80	23.03	114.00	4950/1.00	NA	NA	1980	Lin, 1981; Wang, 2000*
224	Inner Mongolia	Chaocha Forest Farm	50°41'N	121°57'E	950	SU	18	Planted	-5.5	425	18	7.60	5.90	32.44	131.40	4050/1.00	NA	NA	1980	Lin, 1981; Wang, 2000*
225	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	NA	NA	Planted	-3.4	462	18	12.00	10.20	29.60	83.76	2830/	NA	NA	NA	Ren, 2010; Xue, 1990; Yang et al., 2002*
226	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	NA	NA	Planted	-3.4	462	18	10.10	7.60	19.00	57.80	3042/	NA	NA	NA	Ren, 2010; Yang et al., 2002*
227	Inner Mongolia	Keyihe Forest Bureau	50°39'N	122°31'E	600	NA	NA	Planted	-2.7	493	18	11.00	12.50	43.75	140.00	3200/	NA	NA	NA	Ren, 2010; Gao et al., 2005*
228	Inner Mongolia	Keyihe Forest Bureau	50°39'N	122°31'E	600	NA	NA	Planted	-2.7	493	18	10.40	14.00	29.51	121.00	4100/	NA	NA	1981	Ren, 2010; Gao et al., 2005*
229	Inner Mongolia	Deerbuer Forest Bureau	50°59'N	121°04'E	805	NA	NA	Planted	-5.3	437	18	6.20	7.80	24.93	86.00	3450/	NA	NA	1983	Ren, 2010; Gao et al., 2005*
230	Inner Mongolia	Deerbuer Forest Bureau	50°59'N	121°04'E	805	NA	NA	Planted	-5.3	437	18	5.20	4.80	7.45	32.60	4375/	NA	NA	NA	Ren, 2010; Xue, 1990; Gao et al., 2005*
231	Inner Mongolia	Boketu Forest Bureau	48°46'N	121°55'E	700	NA	NA	Planted	-1.0	432	18	7.90	6.80	15.71 ^E	NA	NA	NA	NA	NA	Wang, 1992
232	Inner Mongolia	Zhalantun City	48°00'N	123°23'E	315	NA	NA	Planted	2.2	496	18	10.50	9.30	37.79 ^E	NA	NA	NA	NA	NA	Wang, 1992
233	Heilongjiang	Dailing Forest Bureau	47°08'N	129°06'E	280	NA	NA	Planted	0.5	727	18	11.70	10.30	51.21 ^E	NA	NA	NA	NA	NA	Wang, 1992
234	Inner Mongolia	Dashimen Forest Farm	48°00'N	122°20'E	466	HSU	<5	Planted	2.4	500	18	10.10	9.80	36.00	101.52	2820/	NA	NA	1981	Wu, 1986
235	Heilongjiang	Heihe City	49°55'N	127°00'E	500	NA	NA	Planted	-1.5	552	18	10.00	13.30	67.01 ^E	NA	NA	400	1	NA	Xiao et al., 2006
236	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	18	13.30	14.30	102.71	147.18	1433/	NA	1	2006	Xu, 2009
237	Heilongjiang	Keyihe Forest Bureau	50°39'N	122°31'E	600	NA	NA	Natural	-2.7	493	18	8.60	6.90	21.58	66.90	3100/	NA	NA	NA	Xue, 1987a;1993; Gao et al., 2005*
238	Heilongjiang	Deerbuer Forest Bureau	50°59'N	121°04'E	805	NA	NA	Natural	-5.3	437	18	2.50	2.30	2.85	11.40	4000/	NA	NA	NA	Xue, 1987a;1993; Gao et al., 2005*
239	Inner Mongolia	Moerdaoga Forest Bureau	51°15'N	120°35'E	900	NA	NA	Natural	-4.5	471	18	6.10	4.20	11.62	154.30	13275/	NA	1	1985	Xue, 1987b; Yang et al., 2002*

240	Heilongjiang	Lvshui Forest Farm	50°48'N	124°17'E	500	NA	NA	Planted	-2.0	500	18	4.88	4.03	4.15	NA	NA	NA	10	NA	Yuan et al., 2001
241	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSU	5	Planted	0.4	618	18	12.30	13.60	99.84	87.86	880/0.70	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
242	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSU	2	Planted	0.4	618	18	13.80	10.00	59.96	73.45	1225/0.60	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
243	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSU	2	Planted	0.4	618	18	12.90	13.60	98.60	120.79	1225/0.60	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
244	Heilongjiang	Dongfanghong Forest Farm	46°57'N	129°10'E	269	SU	8	Planted	1.4	661	18	11.60	13.40	80.53 ^E	298.30 ^E	3704/	NA	NA	2007	Zhang, 2010; Zhang et al., 2011
245	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	18	9.70	9.30	34.50 ^E	59.78 ^E	1733/	600	1	2011	Zhu et al., 2013; Zhu, 2013
246	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	18	9.00	8.70	28.15 ^E	51.59 ^E	1833/	600	1	2011	Zhu et al., 2013; Zhu, 2013
247	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	18	8.00	8.10	21.68 ^E	36.14 ^E	1667/	600	1	2011	Zhu et al., 2013; Zhu, 2013
248	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	650	HSU	7	Planted	-5.0	455	18	5.30	4.33	4.49 ^E	NA	NA	600	3	2012	Zou et al., 2013; Xin et al., 2014
249	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	19	10.31	10.19	43.45 ^E	133.61 ^E	3075/	NA	1	1984	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
250	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	HSH	<5	Planted	4.5	450	19	9.50	7.40	15.20	66.90	4400/	NA	1	1982	Fu, 1984; Cao, 2011*
251	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	HSH	<5	Planted	4.5	450	19	9.90	8.20	19.12	54.00	2825/	NA	1	1982	Fu, 1984; Cao, 2011*
252	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	524	HSU	17	Planted	-5.0	455	19	5.77	5.48	7.49 ^E	13.64	NA	600	1	2011	Han et al., 2012b; 2015; Han, 2013
253	Heilongjiang	Mohe County	52°58'N	122°31'E	423	NA	NA	Planted	-4.3	430	19	7.69	6.90	15.63 ^E	33.52 ^E	2145/	600	3	2009	Huang, 2011; Huang et al., 2011b; Sun et al., 2012*
254	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	HSH	5-8	Planted	-0.3	575	19	13.00	10.68	59.45	115.33	1940/	NA	1	1975	Liu, 1984; Zhang, 2008b*
255	Inner Mongolia	Jiwen Forest Bureau	50°35'N	123°44'E	750	NA	NA	Planted	-2.0	510	19	10.00	9.70	35.78	95.00	2655/	NA	NA	1981	Ren, 2010; Xue, 1987a; Gao et al., 2005*
256	Heilongjiang	Maorshan Forest Farm	45°20'N	127°34'E	300	NA	NA	Planted	2.7	780	19	14.00	13.60	102.61 ^E	NA	NA	NA	NA	NA	Wang et al., 1994
257	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	19	11.30	9.20	30.10	69.23	2300/	NA	1	2006	Xu, 2009
258	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	19	11.70	8.50	21.46	63.68	2967/	NA	1	2006	Xu, 2009
259	Inner Mongolia	Deerbuer Forest Bureau	50°59'N	121°04'E	805	NA	NA	Planted	-5.3	437	19	8.40	10.30	34.99 ^E	98.99	/0.90	NA	6	1985	Xu & Han, 1994
260	Inner Mongolia	Aershan Forest Bureau	47°30'N	120°15'E	954	NA	NA	Planted	-3.3	425	19	9.60	8.00	23.47	69.00	2940/	NA	1	1980	Xue, 1987b; Yang et al., 2002*
261	Heilongjiang	Maorshan Forest Farm	45°20'N	127°34'E	300	NA	NA	Planted	2.8	737	19	11.90	15.46	106.35	NA	3333 ^P /	240	5	2001	Yang et al., 2002
262	Inner Mongolia	Xikou & Mingshui Forest Farm	46°43'N	120°45'E	950	NA	NA	Planted	0.0	460	19	11.20	10.69	72.94	165.87	2274/	600	8	NA	Yao et al., 1995
263	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	19	11.30	13.70	83.62	47.41	567/	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
264	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	19	13.20	15.50	123.93	103.23	833/	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
265	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSU	10	Planted	0.4	618	19	12.50	14.00	102.80	114.11	1110/0.60	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
266	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSH	3	Planted	0.4	618	19	12.50	10.90	56.95	108.21	1900/0.60	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
267	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSU	3	Planted	0.4	618	19	12.10	8.20	33.45	142.99	4275/0.60	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
268	Heilongjiang	Maorshan Forest Farm	45°25'N	127°33'E	439	HSH	8	Planted	2.8	723	19	12.60	11.90	71.88 ^E	136.57 ^E	1900/	400	3	2005	Zhou et al., 2007
269	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	20	10.52	10.34	45.63 ^E	140.30 ^E	3075/	NA	1	1985	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*

270	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	HSH	<5	Planted	4.5	450	20	9.60	9.40	25.90	80.30	3100/	NA	1	1982	Fu, 1984; Cao, 2011*
271	Inner Mongolia	Suolun Forest Farm	46°36'N	121°14'E	800	HSH	<5	Planted	4.5	450	20	10.60	11.20	38.32	70.90	1850/	NA	1	1982	Fu, 1984; Cao, 2011*
272	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	NA	NA	Planted	-0.3	676	20	13.50	13.90	102.26 ^E	NA	NA	NA	NA	1973	He, 1988
273	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	NA	NA	Planted	-1.5	386	20	11.00	8.80	35.81	96.70	2700/	NA	NA	1980	Ren, 2010; Xue, 1987a; Wu, 2015*
274	Heilongjiang	Maorshan Forest Farm	45°23'N	127°32'E	450	HSH	10-15	Planted	2.8	724	20	13.80	12.26	84.10 ^E	NA	3333 ^P /	600	3	2005	Song et al., 2008b; Jia, 2009
275	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	20	13.90	12.70	73.56	84.15	1144/	NA	1	2006	Xu, 2009
276	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	20	14.20	11.90	64.01	81.29	1270/	NA	1	2006	Xu, 2009
277	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	20	13.50	11.90	60.34	94.74	1570/	NA	1	2006	Xu, 2009
278	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	20	13.80	12.40	65.20	106.53	1634/	NA	1	2006	Xu, 2009
279	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	20	11.70	9.40	27.66	104.20	3767/	NA	1	2006	Xu, 2009
280	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSH	3	Planted	0.4	618	20	11.60	8.90	34.41	129.63	3767/0.60	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
281	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	20	13.00	16.10	126.07	77.79	617/	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
282	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	20	11.10	15.30	117.20	107.47	917/	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
283	Heilongjiang	Daliangzihe Forest Park	47°01'N	129°41'E	365	SH	NA	Planted	1.3	610	20	16.00	NA	NA	NA	/0.40	NA	NA	2013	Zhang et al., 2015a; b
284	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	21	NA	15.40	113.71	230.14	2024/	1000	1	1978	Ding, 1988; Chen et al., 1994
285	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	21	NA	14.00	97.54	235.55	2415/	1000	1	1978	Ding, 1988; Chen et al., 1994
286	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	21	NA	13.40	89.59	227.30	2537/	1000	1	1978	Ding, 1988; Chen et al., 1994
287	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	21	NA	13.00	84.76	233.94	2760/	1000	1	1978	Ding, 1988; Chen et al., 1994
288	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	21	NA	13.20	76.39	216.96	2840/	1000	1	1978	Ding, 1988; Chen et al., 1994
289	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	21	10.72	10.71	49.60 ^E	152.52 ^E	3075/	NA	1	1986	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
290	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	538	HSU	13	Planted	-5.0	455	21	6.54	6.19	10.72 ^E	15.84	/0.50	600	1	2011	Han, 2013; Han et al., 2015b
291	Heilongjiang	Mohe County	52°58'N	122°31'E	490	NA	NA	Planted	-4.3	430	21	8.67	9.49	31.42 ^E	54.98 ^E	1750/	600	3	2009	Huang, 2011; Huang et al., 2011b; Sun et al., 2012*
292	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	NA	NA	Planted	-0.3	575	21	15.44	15.78	157.65	173.42	1100/	NA	NA	1973	Liu, 1984; Zhang, 2008b*
293	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	NA	NA	Planted	-0.3	575	21	16.56	16.13	176.13	197.62	1122/	NA	NA	1973	Liu, 1984; Zhang, 2008b*
294	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	NA	NA	Planted	-0.3	575	21	15.35	14.59	151.31	236.35	1562/	NA	NA	1973	Liu, 1984; Zhang, 2008b*
295	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	NA	NA	Planted	-0.3	575	21	15.72	14.36	133.96	241.66	1804/	NA	NA	1973	Liu, 1984; Zhang, 2008b*
296	Heilongjiang	Dailing Forest Bureau	47°05'N	128°54'E	504	NA	NA	Planted	-0.3	575	21	15.66	12.93	108.98	230.17	2112/	NA	NA	1973	Liu, 1984; Zhang, 2008b*
297	Heilongjiang	Maorshan Forest Farm	45°16'N	127°34'E	350	SU	7	Planted	2.8	724	21	13.50	13.40	95.88	139.02	1450/0.90	400	1	1987	Liu et al., 1990a; 1998; Wang et al., 2001b
298	Heilongjiang	Maorshan Forest Farm	45°16'N	127°34'E	330	SU	NA	Planted	2.5	724	21	15.00	12.00	89.14 ^E	NA	/0.70	NA	NA	1981	Ma, 1983
299	Heilongjiang	Nehe County	47°58'N	124°22'E	170	NA	NA	Planted	2.0	427	21	7.50	8.00	19.69 ^E	NA	NA	NA	NA	NA	Mao et al., 1998

300	Heilongjiang	Cuohai Forest Farm	47°27'N	122°51'E	350	NA	NA	Planted	3.4	446	21	10.24	11.51	57.68	NA	NA	NA	3-5	2003	Na, 2005
301	Heilongjiang	Liangshui Nature Reserve	47°10'N	128°53'E	500	NA	NA	Planted	-0.3	575	21	11.38	12.55	80.58	NA	NA	NA	3-5	2003	Na, 2005
302	Heilongjiang	Jiagedaqi Forest Bureau	50°24'N	124°07'E	400	NA	NA	Planted	-1.3	500	21	12.15	15.93	128.82	NA	NA	NA	3-5	2003	Na, 2005
303	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	NA	NA	Planted	2.8	737	21	13.08	16.61	128.49	71.44	556/	240	5	2003	Na et al., 2005
304	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	21	NA	NA	100.62	162.00	1610/	NA	NA	1979	Tang et al., 2009
305	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	21	NA	NA	71.54	176.00	2460/	NA	NA	1979	Tang et al., 2009
306	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	21	NA	NA	58.66	168.00	2864/	NA	NA	1979	Tang et al., 2009
307	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	21	NA	NA	43.20	162.00	3750/	NA	NA	1979	Tang et al., 2009
308	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.3	660	21	NA	NA	41.07	160.00	3896/	NA	NA	1979	Tang et al., 2009
309	Heilongjiang	Hengdaohezi Forest Farm	44°49'N	129°05'E	242	NA	NA	Planted	2.5	521	21	12.40	16.60	126.71 ^E	NA	NA	NA	NA	NA	Wang, 1992
310	Heilongjiang	Tongtiany Forest Farm	45°42'N	130°33'E	420	HSU	7	Planted	3.0	543	21	14.68	15.06	103.93	83.14	800/	5000	7	1977	Wu et al., 1983
311	Heilongjiang	Beiji Village	53°27'N	122°21'E	400	HSU	4	Natural	-5.4	500	21	12.20	23.10	222.33 ^E	107.39 ^E	483/0.89	600	3	2009	Xu et al., 2011a; 2013
312	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	21	14.40	15.40	119.23	91.45	767/	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
313	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	21	12.30	14.50	90.37	82.87	917/	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
314	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	21	11.70	14.00	84.24	88.45	1050/	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
315	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	21	6.66	7.00	13.59 ^E	27.40 ^E	2017/	600	1	2011	Zhu et al., 2013; Zhu, 2013
316	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	552	SU	6	Planted	-5.0	455	21	7.50	8.26	20.83 ^E	NA	2500 ^P /0.70	600	3	2012	Zou et al., 2013; Xin et al., 2014; Wang et al., 2015a
317	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	22	10.95	10.96	52.93 ^E	162.76 ^E	3075/	NA	1	1987	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
318	Inner Mongolia	Haolipu Forest Farm	50°41'N	120°57'E	970	SU	22	Planted	-5.5	425	22	11.00	9.30	52.81	160.80	3045/1.00	NA	NA	1980	Lin, 1981; Wang, 2000*
319	Inner Mongolia	Nanmu Forest Bureau	48°10'N	122°20'E	550	NA	NA	Planted	2.4	500	22	12.50	11.80	70.18 ^E	NA	NA	NA	NA	NA	Liu et al., 1989; Wu, 1986*
320	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	NA	NA	Planted	-1.5	386	22	8.00	7.40	20.30	53.19	2620/	NA	NA	NA	Ren, 2010; Wu, 2015*
321	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	NA	NA	Planted	-1.5	386	22	8.50	8.70	28.24	75.32	2667/	NA	NA	NA	Ren, 2010; Wu, 2015*
322	Heilongjiang	Daliangzihe Forest Park	47°01'N	129°41'E	385	SH	10	Planted	1.5	650	22	17.00	18.95	229.85 ^E	NA	/0.50	625	3	2012	Wang et al., 2015b
323	Inner Mongolia	Dashimen Forest Farm	48°00'N	122°20'E	525	HSU	<5	Planted	2.4	500	22	12.50	12.70	65.00	122.60	1886/	NA	NA	1985	Wu, 1986
324	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	22	13.80	17.40	165.16	118.42	717/	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
325	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSU	1	Planted	0.4	618	22	13.30	13.30	94.94	112.31	1183/0.50	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
326	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSH	1	Planted	0.4	618	22	12.10	13.40	87.08	117.55	1350/0.40	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
327	Inner Mongolia	Aershan Forest Bureau	47°30'N	120°15'E	954	HSU	<5	Planted	-3.3	425	23	8.40	10.00	33.21 ^E	NA	/0.90	600	3	NA	Chen & Xiao, 2006
328	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	552	SU	25	Planted	-4.9	432	23	10.88	11.05	53.30 ^E	NA	/0.80	600	3	2011	Chen et al., 2012a; 2013
329	Heilongjiang	Xiangshun Forest Farm	46°03'N	129°08'E	220	NA	<15	Planted	3.1	541	23	13.20	13.40	32.63	159.90	4900/	NA	1	NA	Dong, 2004; Liu, 2002*

330	Heilongjiang	Xiangshun Forest Farm	46°03'N	129°08'E	220	NA	<15	Planted	3.1	541	23	15.40	14.00	37.27	178.90	4800/	NA	1	NA	Dong, 2004; Liu, 2002*
331	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	23	11.15	11.22	56.32 ^E	173.17 ^E	3075/	NA	1	1988	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
332	Heilongjiang	Guli Forest Farm	50°04'N	124°56'E	405	NA	NA	Planted	-1.3	500	23	11.50	11.31	59.18 ^E	153.87 ^E	2600/	600	3	2009	Huang et al., 2011b; Liu et al., 1990b*
333	Heilongjiang	Qingshan Forest Farm	44°39'N	129°33'E	400	NA	NA	Planted	2.5	550	23	11.48	17.58	156.00	NA	NA	NA	7	2007	Li, 2009
334	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	HSU	24-26	Planted	-3.4	462	23	11.00	9.60	40.60	138.40	3409/0.90	NA	NA	1980	Lin, 1981; Yang et al., 2002*
335	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	HSU	24-26	Planted	-3.4	462	23	10.50	10.40	50.02	166.70	3333/0.90	NA	NA	1980	Lin, 1981; Yang et al., 2002*
336	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	HSU	22-24	Planted	-3.4	462.3	23	9.70	7.80	27.35	155.90	5700/0.90	NA	NA	1980	Lin, 1981; Yang et al., 2002*
337	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Planted	-5.0	436	23	10.30	9.60	29.60	131.70	4450/0.90	NA	NA	1980	Ren, 2010; Xue, 1987a; Yang et al., 2002*
338	Inner Mongolia	Wangyedian Forest Farm	41°39'N	118°23'E	1124	HSH	14	Planted	4.2	521	23	11.50	11.00	56.36 ^E	147.09 ^E	2610/	375	1	1988	Sun & Sun, 1992
339	Liaoning	Caohekou Forest Farm	40°53'N	123°51'E	296	HSU	19	Planted	6.1	926	23	12.38	11.04	61.74 ^E	123.78 ^E	2005/	600	3	2014	Wang, 2015
340	Heilongjiang	Xinlin Forest Farm	51°39'N	124°28'E	680	NA	6	Natural	-2.6	514	23	NA	9.80	40.98 ^E	49.18 ^E	1200/	400	1	NA	Xiao & Yang, 2014
341	Inner Mongolia	Niufentai Forest Farm	46°52'N	120°15'E	900	NA	NA	Planted	-1.0	460	23	12.10	11.77	54.35	117.07	2154/	600	6	NA	Yao et al., 1995
342	Inner Mongolia	Hamajia Forest Farm	45°55'N	121°11'E	516	NA	NA	Planted	3.5	390	23	16.20	12.18	48.00	94.99	1979/	600	1	NA	Yao et al., 1995
343	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSH	1	Planted	0.4	618	23	16.50	16.40	180.24	243.33	1350/0.60	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
344	Heilongjiang	Guofu Forest Farm	47°35'N	126°02'E	247	NA	NA	Planted	1.2	490	23	13.50	14.89	84.20	129.69	1540/	1000	≥1	NA	Zhang et al., 2012
345	Heilongjiang	Jiagedaqi Forest Bureau	50°22'N	124°06'E	427	NA	7	Natural	1.0	500	23	18.60	14.00	149.68 ^E	306.25 ^E	2046/0.80	400	1	2012	Zhou et al., 2014
346	Heilongjiang	Jiagedaqi Forest Bureau	50°22'N	124°06'E	421	NA	7	Natural	1.0	500	23	18.00	16.30	188.34 ^E	268.58 ^E	1426/0.80	400	1	2012	Zhou et al., 2014
347	Heilongjiang	Maorshan Forest Farm	45°23'N	127°33'E	325	HSH	30	Planted	2.8	724	24	14.07	13.10	80.70	119.03	1475/	400	13	1981	Ding et al., 1982; 1990; Yao et al., 1994
348	Heilongjiang	Maorshan Forest Farm	45°23'N	127°33'E	325	HSH	30	Planted	2.8	724	24	14.60	14.85	112.50	152.87	1358/	400	13	1981	Ding et al., 1982; 1990; Yao et al., 1994
349	Heilongjiang	Maorshan Forest Farm	45°23'N	127°33'E	325	HSH	30	Planted	2.8	724	24	15.16	15.75	129.90	168.87	1300/	400	13	1981	Ding et al., 1982; 1990; Yao et al., 1994
350	Heilongjiang	Maorshan Forest Farm	45°23'N	127°33'E	325	HSH	30	Planted	2.8	724	24	16.40	17.07	149.90	173.58	1158/	400	13	1981	Ding et al., 1982; 1990; Yao et al., 1994
351	Heilongjiang	Xiangshun Forest Farm	46°03'N	129°08'E	220	HSU	<15	Planted	3.1	541	24	12.70	13.50	26.21	123.20	4700/	NA	1	NA	Dong, 2004; Liu, 2002*
352	Heilongjiang	Xiangshun Forest Farm	46°03'N	129°08'E	220	SH	<15	Planted	3.1	541	24	13.50	15.50	30.81	144.80	4700/	NA	1	NA	Dong, 2004; Liu, 2002*
353	Heilongjiang	Xiangshun Forest Farm	46°03'N	129°08'E	220	NA	<15	Planted	3.1	541	24	14.00	14.30	112.07 ^E	174.90	NA	NA	1	NA	Dong, 2004; Liu, 2002*
354	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	24	11.50	11.37	59.73 ^E	183.68 ^E	3075/	NA	1	1989	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
355	Heilongjiang	Maorshan Ecological Station	45°26'N	127°34'E	300	NA	10-15	Planted	2.8	737	24	NA	19.42	257.73 ^E	143.18 ^E	556/	720	7	2006	E, 2008; E et al., 2009
356	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	548	HSU	15	Planted	-5.0	455	24	9.39	10.29	39.70 ^E	78.23	/0.60	600	1	2011	Han et al., 2012b; 2015; Han, 2013
357	Heilongjiang	Maorshan Forest Farm	45°23'N	127°33'E	325	HSH	10	Planted	2.8	723	24	19.10	15.40	182.47 ^E	208.38 ^E	1142/0.80	400	3	2010	Liu, 2012
358	Heilongjiang	Dailing Forest Bureau	46°55'N	129°07'E	650	NA	NA	Planted	1.4	661	24	17.45	22.57	338.9	NA	2222 ^P /	NA	NA	2009	Shang et al., 2010
359	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	1080	SH	NA	Planted	-3.4	462	24	8.72	10.38	37.02 ^E	74.05 ^E	2000/0.80	660	3	1992	Tian et al., 1998; Yang et al., 2002*

360	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	1080	SU	NA	Planted	-3.4	462	24	8.68	10.22	35.84 ^E	71.67 ^E	2000/0.80	660	3	1992	Tian et al., 1998; Yang et al., 2002*
361	Inner Mongolia	Chaocha Forest Farm	50°41'N	121°57'E	950	NA	NA	Planted	-5.5	425	24	9.00	9.00	29.88 ^E	NA	/0.70	667	1	1991	Wang, 2000; Xu & Han, 1994
362	Jilin	Xujiadong Forest Farm	42°16'N	128°41'E	800	FL	0	Planted	5.0	500	24	NA	13.50	104.99	136.49	1300/	600	1	2012	Wang et al., 2013a; Wang, 1992*
363	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	24	16.40	16.90	149.55	116.65	780/	NA	1	2006	Xu, 2009
364	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	24	17.80	16.60	140.65	125.32	891/	NA	1	2006	Xu, 2009
365	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	24	16.30	17.10	155.49	143.05	920/	NA	1	2006	Xu, 2009
366	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	24	16.30	15.20	119.07	130.86	1099/	NA	1	2006	Xu, 2009
367	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	24	17.60	15.80	127.93	152.24	1190/	NA	1	2006	Xu, 2009
368	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	NA	NA	Planted	0.4	618	24	17.20	15.80	126.84	161.97	1277/	NA	1	2006	Xu, 2009
369	Inner Mongolia	Aershan Forest Bureau	47°30'N	120°15'E	954	NA	NA	Planted	-3.3	425	24	12.90	10.00	30.95	91.00	2940/	NA	1	1985	Xue, 1987b; Yang et al., 2002*
370	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	NA	NA	Planted	-1.5	386	24	10.20	12.10	65.93	92.30	1400/	NA	NA	NA	Xue, 1993; Wu, 2015*
371	Inner Mongolia	Dayangshu Forest Bureau	49°45'N	124°36'E	328	NA	NA	Planted	-0.6	427	24	10.10	14.40	46.00	138.00	3000/	NA	NA	1981	Xue, 1993; Gao et al., 2005*
372	Inner Mongolia	South area of Daxing'anling	46°49'N	120°10'E	1080	NA	<15	Planted	-0.6	475	24	13.50	14.50	104.00	156.00	1500/	NA	NA	NA	Zhang & Fang, 1998; Yang & Liu, 2005
373	Heilongjiang	Guofu Forest Farm	47°35'N	126°02'E	247	NA	NA	Planted	1.2	490	24	13.90	15.11	104.60	146.44	1400/	1000	≥1	NA	Zhang et al., 2012
374	Heilongjiang	Jiagedaqi Forest Bureau	50°22'N	124°06'E	410	NA	4	Natural	1.0	500	24	15.00	14.00	116.89 ^E	202.56 ^E	1733/0.70	400	1	2012	Zhou et al., 2014
375	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	544	SU	6	Planted	-5.0	455	24	11.40	13.13	76.16 ^E	NA	2500 ^P /0.80	600	3	2012	Zou et al., 2013; Xin et al., 2014; Wang et al., 2015a
376	Heilongjiang	Maorshan Forest Farm	45°23'N	127°32'E	300	NA	NA	Planted	2.7	729	25	17.20	16.50	182.63 ^E	225.91 ^E	1237/0.80	NA	1	1994	Cui et al., 2000
377	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	25	11.90	11.65	64.84 ^E	199.39 ^E	3075/	NA	1	1990	Dong, 2008; Bi, 2001; Li, 1993; Wu, 2015*
378	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	HSH	5-8	Planted	-0.3	575	25	15.96	12.62	99.03	121.07	1230/	NA	NA	1981	Liu, 1984; Zhang, 2008b*
379	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	HSH	5-8	Planted	-0.3	575	25	16.15	13.26	111.07	147.72	1330/	NA	NA	1981	Liu, 1984; Zhang, 2008b*
380	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	HSH	5-8	Planted	-0.3	575	25	16.24	14.19	127.68	178.75	1400/	NA	NA	1981	Liu, 1984; Zhang, 2008b*
381	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	HSH	5-8	Planted	-0.3	575	25	16.12	13.32	111.83	166.63	1490/	NA	NA	1981	Liu, 1984; Zhang, 2008b*
382	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	HSH	5-8	Planted	-0.3	575	25	16.56	14.56	137.31	205.97	1500/	NA	NA	1981	Liu, 1984; Zhang, 2008b*
383	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	HSH	5-8	Planted	-0.3	575	25	16.38	13.60	119.41	202.76	1698/	NA	NA	1981	Liu, 1984; Zhang, 2008b*
384	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	HSH	5-8	Planted	-0.3	575	25	15.81	12.47	95.94	185.16	1930/	NA	NA	1981	Liu, 1984; Zhang, 2008b*
385	Heilongjiang	Liangshui Nature Reserve	47°13'N	128°46'E	500	NA	NA	Planted	0.5	655	25	17.00	14.30	112.93	131.00	1160/	NA	NA	NA	Luo et al., 2013
386	Heilongjiang	Qianwei Forest Farm	48°34'N	129°26'E	220	HSH	3-5	Natural	0.8	592	25	12.00	12.50	74.10 ^E	72.77 ^E	982/0.80	NA	NA	1984	Piao et al., 1991
387	Heilongjiang	Tongtianyi Forest Farm	45°42'N	130°33'E	420	HSU	7	Planted	3.0	543	25	15.13	16.51	129.94	102.84	791/	5000	7	1981	Wu et al., 1983
388	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	SH	6	Planted	1.3	660	25	NA	14.25	110.99 ^E	177.58 ^E	1600/	NA	NA	NA	Xu et al., 2011b; Huang et al., 2011a; Zhang, 2010*
389	Heilongjiang	Daqingchuan Forest Farm	47°01'N	129°05'E	224	SH	15	Planted	1.3	660	25	NA	12.25	73.98 ^E	130.05 ^E	1758/	NA	NA	NA	Xu et al., 2011b; Huang et al., 2011a; Zhang, 2010*

390	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Planted	-5.0	436	25	9.50	8.30	29.69	86.10	2900/	NA	NA	NA	Xue, 1993; Yang et al., 2002*
391	Heilongjiang	Jiagedaqi Forest Bureau	50°22'N	124°06'E	417	NA	5	Natural	1.0	500	25	22.10	14.50	194.11 ^E	412.49 ^E	2125/0.85	400	1	2012	Zhou et al., 2014
392	Heilongjiang	Jiagedaqi Forest Bureau	50°22'N	124°06'E	432	NA	0	Natural	1.0	500	25	13.20	11.50	71.40 ^E	109.39 ^E	1532/0.60	400	1	2012	Zhou et al., 2014
393	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	25	12.70	11.30	66.23 ^E	119.21 ^E	1800/	600	1	2011	Zhu et al., 2013; Zhu, 2013
394	Inner Mongolia	Tulihe Forest Bureau	50°24'N	121°42'E	800	NA	NA	Natural	-5.0	451	26	5.90	4.74	9.27	86.20	9300/	NA	1	NA	Cheng & Li, 1989; Wang et al., 2001b
395	Inner Mongolia	Tulihe Forest Bureau	50°24'N	121°42'E	800	NA	NA	Natural	-5.0	451	26	9.90	10.30	49.18	65.31	1328/	NA	6	NA	Cheng & Li, 1989; Wang et al., 2001b
396	Inner Mongolia	Tulihe Forest Bureau	50°24'N	121°42'E	800	NA	NA	Natural	-5.0	451	26	11.20	10.20	47.79	99.55	2083/	NA	9	NA	Cheng & Li, 1989; Wang et al., 2001b
397	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	26	NA	15.20	65.51	173.60	2650/	600-1500	1	1986	Hong et al., 1994
398	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	650	HSU	15	Natural	-3.0	500	26	14.40	18.17	176.39 ^E	NA	/0.70	600	1	2006	Jiang, 2008; Jiang et al., 2007; Lu et al., 2013*
399	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	26	12.98	11.78	65.30	200.70	3074/1.00	NA	1	1991	Li,1993; Dong, 2001; Wu, 2015*
400	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	26	13.80	12.84	77.70	194.60	2505/1.00	NA	1	1991	Li,1993; Dong, 2001; Wu, 2015*
401	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	26	14.10	13.98	92.90	185.40	1996/1.00	NA	1	1991	Li,1993; Dong, 2001; Wu, 2015*
402	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	26	14.38	14.97	107.50	172.50	1605/0.95	NA	1	1991	Li,1993; Dong, 2001; Wu, 2015*
403	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	26	14.50	16.00	125.40	154.30	1230/0.90	NA	1	1991	Li,1993; Dong, 2001; Wu, 2015*
404	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	26	14.72	18.16	164.60	140.70	855/0.80	NA	1	1991	Li,1993; Dong, 2001; Wu, 2015*
405	Inner Mongolia	Wujiu Forest Farm	49°29'N	121°20'E	700	NA	NA	Planted	-1.5	386	26	15.10	20.48	213.20	134.30	630/0.70	NA	1	1991	Li,1993; Dong, 2001; Wu, 2015*
406	Heilongjiang	Huzhong Forest Bureau	51°50'N	123°30'E	812	NA	<5	Planted	-4.4	482	26	10.51	13.79	75.56 ^E	133.48 ^E	1767/	400	3	2009	Qi et al., 2011; 2013; Hu et al., 2012*
407	Inner Mongolia	Chaocha Forest Farm	50°41'N	121°57'E	950	NA	NA	Planted	-5.5	425	26	10.50	12.80	66.26 ^E	NA	/0.70	667	1	1991	Wang, 2000; Xu & Han, 1994
408	Inner Mongolia	Chaocha Forest Farm	50°41'N	121°57'E	950	NA	NA	Planted	-5.5	425	26	7.20	6.90	14.49 ^E	NA	/0.70	667	1	1991	Wang, 2000; Xu & Han, 1994
409	Inner Mongolia	Chaocha Forest Farm	50°50'N	121°31'E	801	HSH	<5	Natural	-5.4	500	26	7.60	5.80	11.36 ^E	68.73 ^E	6050/0.80	400	1	NA	Wang et al., 2013c
410	Heilongjiang	Xinlin Forest Farm	51°39'N	124°28'E	680	NA	6	Natural	-2.6	514	26	NA	9.20	34.74 ^E	63.40 ^E	1825/	400	1	NA	Xiao & Yang, 2014
411	Inner Mongolia	Chuoyuan Forest Bureau	48°39'N	121°30'E	950	NA	NA	Natural	-3.4	462	26	11.50	8.30	28.78	61.30	2130/	NA	NA	NA	Xue, 1987a;1993; Yang et al., 2002*
412	Inner Mongolia	Alihe Forest Bureau	50°35'N	123°43'E	525	NA	NA	Planted	-2.5	483	26	10.90	11.00	55.38	93.20	1683/	NA	NA	NA	Xue, 1993; Gao et al., 2005*
413	Inner Mongolia	Keyihe Forest Bureau	50°39'N	122°31'E	600	NA	NA	Planted	-2.7	493	26	11.80	15.30	110.58	132.70	1200/	NA	NA	NA	Xue, 1993; Gao et al., 2005*
414	Inner Mongolia	Bailang Forest Bureau	47°02'N	120°09'E	1152	NA	NA	Planted	-2.0	460	26	14.23	13.86	80.36	163.21	2031/	600	7	NA	Yao et al., 1995
415	Heilongjiang	Guofu Forest Farm	47°35'N	126°02'E	247	NA	NA	Planted	1.2	490	26	15.50	17.66	100.60	118.70	1180/	1000	≥1	NA	Zhang et al., 2012
416	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	26	NA	NA	64.91	172.00	2650/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
417	Inner Mongolia	Balin Forest Bureau	48°23'N	122°02'E	542	SH	NA	Planted	-3.4	450	26	12.00	13.00	38.82	165.00	4250/1.00	NA	NA	1990	Zhou, 1998; Gao et al., 2005*
418	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	27	NA	17.80	168.77	217.37	1288/	1000	1	1984	Ding, 1988; Chen et al., 1994
419	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	27	NA	17.10	155.42	268.10	1725/	1000	1	1984	Ding, 1988; Chen et al., 1994

420	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	27	NA	16.10	137.77	272.10	1975/	1000	1	1984	Ding, 1988; Chen et al., 1994
421	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	27	NA	15.72	128.10	258.77	2020/	1000	1	1984	Ding, 1988; Chen et al., 1994
422	Heilongjiang	Maorshan Forest Farm	45°26'N	127°34'E	300	FL	0	Planted	2.8	724	27	NA	14.70	118.54	251.30	2120/	1000	1	1984	Ding, 1988; Chen et al., 1994
423	Inner Mongolia	Balin Forest Bureau	47°32'N	122°42'E	1000	NA	NA	Planted	-3.4	450	27	8.10	8.20	14.21	40.32	2837/0.85	400	4	NA	Han, 1987; Gao et al., 2005*
424	Heilongjiang	Ningan City	44°19'N	129°41'E	358	NA	NA	Planted	3.4	436	27	NA	17.13	182.82 ^E	153.75 ^E	841/	900	3	NA	Song, 2013; Wang, 2003*
425	Heilongjiang	Wuchang City	44°39'N	127°45'E	272	FL	0	Planted	2.3	818	27	NA	10.51	49.27 ^E	78.63 ^E	1596/	900	3	NA	Song, 2013; Zhu, 2008*
426	Inner Mongolia	Chuoer Forest Bureau	47°59'N	121°12'E	763	NA	NA	Natural	-3.4	462	27	8.80	5.80	15.16	101.40	6690/	NA	1	1980	Xue, 1987b; Yang et al., 2002*
427	Inner Mongolia	Aershan Forest Bureau	47°17'N	119°51'E	886	NA	NA	Planted	-3.3	425	27	14.10	17.50	72.12	172.80	2396/	NA	NA	NA	Xue, 1993; Sun et al., 2001; Yang et al., 2002*
428	Inner Mongolia	Chuoyuan Forest Bureau	48°39'N	121°30'E	950	NA	NA	Planted	-3.4	462	27	11.80	12.20	66.12	125.90	1904/	NA	NA	NA	Xue, 1993; Yang et al., 2002*
429	Inner Mongolia	Jiwen Forest Bureau	50°35'N	123°44'E	750	NA	NA	Planted	-2.0	510	27	12.60	15.00	111.50	178.40	1600/	NA	NA	NA	Xue, 1993; Gao et al., 2005*
430	Inner Mongolia	Deerbuer Forest Bureau	50°59'N	121°04'E	805	NA	NA	Planted	-5.3	437	27	10.30	10.00	41.51	186.80	4500/	NA	NA	NA	Xue, 1993; Gao et al., 2005*
431	Heilongjiang	Guofu Forest Farm	47°35'N	126°02'E	247	NA	NA	Planted	1.2	490	27	16.98	19.44	149.00	184.16	1240/	1000	≥1	NA	Zhang et al., 2012
432	Heilongjiang	Jiagedaqi Forest Bureau	50°22'N	124°06'E	422	NA	3	Natural	1.0	500	27	21.50	15.10	201.96 ^E	398.88 ^E	1975/0.80	400	1	2012	Zhou et al., 2014
433	Heilongjiang	Changfa Forest Farm	46°44'N	130°28'E	134	NA	<15	Planted	2.5	470	28	13.30	13.40	32.60	156.50	4800/	NA	1	NA	Dong, 2004
434	Heilongjiang	Changfa Forest Farm	46°44'N	130°28'E	134	NA	<15	Planted	2.5	470	28	14.80	15.40	35.21	169.00	4800/	NA	1	NA	Dong, 2004
435	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	SU	5	Natural	-2.8	428	28	15.40	22.30	273.14 ^E	NA	/0.50	600	1	2007	Jiang, 2008; Hong et al., 1994*
436	Heilongjiang	Deerbuer Forest Bureau	50°59'N	121°04'E	805	NA	NA	Natural	-5.3	437	28	10.60	11.60	56.34 ^E	100.52	/0.60	NA	8	1985	Xu & Han, 1994
437	Inner Mongolia	South area of Daxing'anling	46°49'N	120°10'E	1080	NA	<15	Planted	-0.6	475	28	13.70	11.00	54.19	168.00	3100/	NA	NA	NA	Zhang & Fang, 1998; Yang & Liu, 2005
438	Inner Mongolia	South area of Daxing'anling	46°49'N	120°10'E	1080	NA	<15	Planted	-0.6	475	28	14.50	8.60	30.41	149.00	4900/	NA	NA	NA	Zhang & Fang, 1998; Yang & Liu, 2005
439	Heilongjiang	Guofu Forest Farm	47°35'N	126°02'E	247	NA	NA	Planted	1.2	490	28	17.80	21.06	172.00	175.46	1020/	1000	≥1	NA	Zhang et al., 2012
440	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	28	9.80	8.40	36.49	97.00	2658/	NA	15	1986	Zhao et al., 1996; Hong et al., 1994*
441	Inner Mongolia	Aershan Forest Bureau	47°31'N	120°24'E	938	NA	NA	Planted	-3.2	452	29	13.80	20.00	198.84 ^E	NA	NA	NA	3	2009	Li et al., 2011
442	Heilongjiang	Xinlin Forest Farm	51°39'N	124°27'E	700	NA	6	Natural	-2.6	514	29	NA	11.70	65.46 ^E	62.18 ^E	950/	400	1	NA	Xiao & Yang, 2014
443	Inner Mongolia	South area of Daxing'anling	46°49'N	120°10'E	1080	NA	<15	Planted	-0.6	475	29	14.80	12.10	68.00	170.00	2500/	NA	NA	NA	Zhang & Fang, 1998; Yang & Liu, 2005
444	Heilongjiang	Guofu Forest Farm	47°35'N	126°02'E	247	NA	NA	Planted	1.2	490	29	18.10	21.52	222.60	211.47	950/	1000	≥1	NA	Zhang et al., 2012
445	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	30	10.81	9.29	35.10	105.60	3000/0.95	NA	1	1982	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
446	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	650	HSH	5	Natural	-3.0	500	30	15.90	18.46	203.25 ^E	NA	/0.80	600	1	2006	Jiang, 2008; Jiang et al., 2007; Lu et al., 2013*
447	Heilongjiang	Maorshan Forest Farm	45°23'N	127°32'E	300	NA	6-15	Planted	2.8	724	30	21.00	25.00	477.00 ^E	NA	/0.80	NA	NA	2010	Mao et al., 2012
448	Inner Mongolia	Yulin Forest Farm	48°26'N	121°22'E	930	NA	NA	Planted	-3.4	462	30	11.00	8.00	30.59 ^E	NA	6600 ^P /	NA	NA	1993	Ren, 2010; Yang et al., 2002*
449	Heilongjiang	Xinlin Forest Farm	51°39'N	124°28'E	680	NA	6	Natural	-2.6	514	30	NA	10.50	49.14 ^E	71.40 ^E	1453/	400	1	NA	Xiao & Yang, 2014

450	Inner Mongolia	Sugehe Forest Farm	48°10'N	121°14'E	814	NA	NA	Planted	-3.4	462	30	14.50	14.20	62.67	188.00	3000/	NA	NA	NA	Xue, 1987a; Yang et al., 2002*
451	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	NA	NA	Natural	-1.5	386	30	9.00	8.00	30.21	87.00	2880/	NA	1	1977	Xue, 1987b; Wu, 2015*
452	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	6	Natural	-4.9	403	30	13.68	10.30	56.36	187.40	3325/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
453	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	31	11.30	9.48	42.52 ^E	127.57 ^E	3000/0.95	NA	1	1983	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
454	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	31	NA	14.20	84.14	93.40	1110/	600-1500	1	1986	Hong et al., 1994
455	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	31	NA	6.30	36.05	75.70	2100/	600-1500	1	1986	Hong et al., 1994
456	Heilongjiang	Maorshan Forest Farm	45°20'N	127°34'E	340	NA	NA	Planted	2.8	724	31	14.20	16.40	122.32	173.70	1420/0.75	1000	1	1999	Jiang, 2003; Jiang et al., 2003; 2005
457	Heilongjiang	Aihua Forest Farm	48°13'N	126°08'E	330	NA	NA	Planted	1.1	550	31	16.80	17.90	205.12 ^E	NA	NA	NA	NA	NA	Mao et al., 1998
458	Inner Mongolia	Wuerqihan Forest Farm	49°37'N	121°50'E	832	HSH	7	Natural	-1.5	386	31	11.00	11.36	56.66 ^E	98.58 ^E	1740/	1000	1	NA	Wang et al., 2013b; Wu, 2015*
459	Heilongjiang	Xiushui Forest Farm	47°14'N	128°52'E	577	HSU	14	Planted	1.3	660	31	NA	16.90	176.21 ^E	112.95 ^E	641/	NA	NA	NA	Xu et al., 2011b; Zhang, 2010*
460	Heilongjiang	Xiushui Forest Farm	47°14'N	128°52'E	577	HSU	8	Planted	1.3	660	31	NA	19.00	242.68 ^E	166.96 ^E	688/	NA	NA	NA	Xu et al., 2011b; Zhang, 2010*
461	Inner Mongolia	Taerqi Forest Farm	48°02'N	121°04'E	837	NA	NA	Planted	-3.4	462	31	19.00	21.00	242.70	266.97	1100/	NA	NA	1989	Xue, 1990; Yang et al., 2002*
462	Inner Mongolia	Kuduer Forest Bureau	49°47'N	121°57'E	820	NA	NA	Planted	-4.0	500	31	14.30	18.00	107.58	129.10	1200/	NA	NA	NA	Xue, 1993; Yang et al., 2002*
463	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	HSU	7	Natural	-4.9	403	31	13.36	10.24	55.08	136.33	2475/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
464	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	32	11.70	9.57	45.00 ^E	135.00 ^E	3000/0.95	NA	1	1984	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
465	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	520	FL	0	Planted	-1.3	500	32	18.60	22.40	342.04 ^E	NA	/0.70	600	1	2007	Jiang, 2008; Jiang et al., 2008; Liu et al., 1990b*
466	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	HSH	5	Natural	-2.8	428	32	17.80	25.40	405.60 ^E	NA	/0.70	600	1	2007	Jiang, 2008; Hong et al., 1994*
467	Liaoning	Caohekou Forest Farm	40°53'N	123°51'E	313	HSH	16	Planted	6.1	926	32	15.06	14.76	128.86 ^E	215.84 ^E	1675/	600	3	2014	Wang, 2015
468	Inner Mongolia	Chuoer Forest Bureau	47°59'N	121°12'E	763	NA	NA	Natural	-3.4	462	32	10.70	7.10	15.74	105.30	6690/	NA	1	1985	Xue, 1987b; Yang et al., 2002*
469	Inner Mongolia	Chuoer Forest Bureau	47°59'N	121°12'E	763	NA	NA	Planted	-3.4	462	32	16.20	16.60	170.57	192.40	1128/	NA	NA	NA	Xue, 1993; Yang et al., 2002*
470	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	32	9.40	7.60	32.32	98.00	3032/	NA	15	1986	Zhao et al., 1996; Hong et al., 1994*
471	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	32	NA	NA	70.18	193.00	2750/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
472	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	32	NA	NA	29.60	128.00	4325/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
473	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	33	12.00	9.98	49.88 ^E	149.63 ^E	3000/0.95	NA	1	1985	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
474	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	33	NA	16.00	85.40	223.50	2617/	600-1500	1	1993	Hong et al., 1994
475	Heilongjiang	Maorshan Forest Farm	45°20'N	127°34'E	340	NA	NA	Planted	2.8	724	33	18.30	16.40	194.03 ^E	NA	NA	NA	NA	2003	Li, 2005
476	Inner Mongolia	Niufentai Forest Farm	46°52'N	120°15'E	900	SU	6-15	Planted	-3.2	380	33	16.90	18.11	210.80 ^E	276.57 ^E	1312/0.90	625	1	NA	Li et al., 2013; Li, 2013a
477	Inner Mongolia	Niufentai Forest Farm	46°52'N	120°15'E	900	SU	6-15	Planted	-3.2	380	33	17.50	16.89	194.10 ^E	301.25 ^E	1552/0.93	625	1	NA	Li et al., 2013; Li, 2013a
478	Inner Mongolia	Niufentai Forest Farm	46°52'N	120°15'E	900	SU	6-15	Planted	-3.2	380	33	16.50	16.50	174.11 ^E	284.14 ^E	1632/0.91	625	1	NA	Li et al., 2013; Li, 2013a
479	Inner Mongolia	Genduohe Forest Farm	47°52'N	121°56'E	467	HSU	15	Planted	2.4	500	33	8.18	10.56	35.46 ^E	45.95 ^E	1296/0.73	900	3	2012	Li et al., 2014

480	Inner Mongolia	Genduohe Forest Farm	47°52'N	121°56'E	463	HSU	18	Planted	2.4	500	33	9.14	11.32	45.52 ^E	79.74 ^E	1752/0.94	900	3	2012	Li et al., 2014
481	Inner Mongolia	Genduohe Forest Farm	47°52'N	121°56'E	459	HSU	20	Planted	2.4	500	33	10.97	11.40	56.84 ^E	115.79 ^E	2037/1.00	900	3	2012	Li et al., 2014
482	Inner Mongolia	Chuoyuan Forest Bureau	48°39'N	121°30'E	950	NA	NA	Planted	-3.4	462	33	14.70	12.00	87.09 ^E	NA	NA	NA	NA	1987	Liu et al., 1989; Yang et al., 2002*
483	Inner Mongolia	Taerqi Forest Farm	48°02'N	121°04'E	837	NA	NA	Planted	-3.4	462	33	14.00	12.00	66.70	192.09	2880/	NA	NA	1988	Xue, 1990; Yang et al., 2002*
484	Inner Mongolia	South area of Daxing'anling	46°49'N	120°10'E	1080	NA	<15	Planted	-0.6	475	33	15.60	16.00	130.00	169.00	1300/	NA	NA	NA	Zhang & Fang, 1998; Yang & Liu, 2005
485	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	33	NA	NA	36.96	146.00	3950/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
486	Heilongjiang	Dailing Forest Bureau	47°08'N	129°06'E	650	NA	NA	Planted	1.3	660	33-34	18.60	18.00	159.00	127	800/	NA	NA	1984	Wang, 1996
487	Inner Mongolia	Aershan Forest Bureau	47°30'N	120°15'E	940	HSH	6-15	Planted	-3.3	425	34	16.80	20.00	249.29 ^E	NA	/0.85	600	3	NA	Chen & Xiao, 2006
488	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	34	12.39	10.40	55.63 ^E	166.90 ^E	3000/0.95	NA	1	1986	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
489	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	34	NA	7.70	37.16	70.60	1900/	600-1500	1	1986	Hong et al., 1994
490	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	HSU	15	Natural	-2.8	428	34	17.90	24.80	391.42 ^E	NA	/0.80	600	1	2007	Jiang, 2008; Hong et al., 1994*
491	Inner Mongolia	Aershan Forest Bureau	47°31'N	120°24'E	912	NA	NA	Planted	-3.2	452	34	16.20	23.20	310.38 ^E	NA	NA	NA	3	2009	Li et al., 2011
492	Heilongjiang	Maorshan Forest Farm	45°20'N	127°34'E	340	NA	NA	Planted	2.8	724	34	22.20	20.30	352.57 ^E	NA	NA	2000	1	2004	Wang & Mao, 2007; 2009
493	Heilongjiang	Beiji Village	53°27'N	122°21'E	400	SU	4	Natural	-5.4	500	34	10.20	16.90	104.46 ^E	69.68 ^E	667/0.85	600	3	2009	Xu et al., 2011a; 2013
494	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	34	9.80	7.50	31.18	114.00	3656/	NA	10	1986	Zhao et al., 1996; Hong et al., 1994*
495	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	34	11.10	13.10	100.00	82.00	820/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
496	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	34	NA	NA	46.17	167.00	3617/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
497	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	34	NA	NA	72.09	164.00	2275/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
498	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	34	NA	NA	54.15	176.00	3250/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
499	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	35	12.70	10.83	61.46 ^E	184.39 ^E	3000/0.95	NA	1	1987	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
500	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	HSU	15	Natural	-2.8	428	35	18.60	26.50	459.64 ^E	NA	/0.50	600	1	2007	Jiang, 2008; Hong et al., 1994*
501	Heilongjiang	Jiagedaqi Forest Bureau	50°20'N	124°05'E	500	HSU	10	Planted	-1.3	500	35	12.00	16.00	114.37 ^E	110.00	/0.75	NA	NA	NA	Zou et al., 2010
502	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	36	13.00	11.04	65.30 ^E	195.91 ^E	3000/0.95	NA	1	1988	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
503	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	896	SU	NA	Natural	-5.4	500	36	5.68	7.50	12.77 ^E	57.08 ^E	4469/	1600	1	NA	Gao, 2014
504	Heilongjiang	Xinglong Township	51°46'N	125°53'E	368	HSU	5	Natural	-2.4	460	36	14.30	11.20	60.85	194.00	3188/	NA	1	1972	Gu, 1985a; Zhao et al., 1999*
505	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	36	NA	13.90	119.39	102.20	856/	600-1500	1	1986	Hong et al., 1994
506	Heilongjiang	Kaikukang Township	53°08'N	124°48'E	350	NA	NA	Natural	-3.0	500	36	11.61	11.20	58.81 ^E	NA	NA	400	3	2010	Lu et al., 2013; Jiang et al., 2012
507	Heilongjiang	Xinlin Forest Farm	51°39'N	124°26'E	705	NA	6	Natural	-2.6	514	36	NA	11.00	55.57 ^E	68.18 ^E	1227/	400	1	NA	Xiao & Yang, 2014
508	Heilongjiang	Maorshan Forest Farm	45°25'N	127°38'E	300	SU	11	Planted	2.8	724	36	15.60	16.70	166.73 ^E	NA	/0.40	NA	NA	2004	Xin et al., 2006
509	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	960	HSH	30	Natural	-5.4	500	36	6.10	6.80	11.67 ^E	38.08 ^E	3263/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007

510	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	900	NA	NA	Natural	-5.4	500	36	8.90	8.00	23.98 ^E	57.50 ^E	2398/	254	1	NA	Yu et al., 2008
511	Inner Mongolia	Xiaojiyu Forest Farm	50°00'N	122°04'E	881	HSU	6	Natural	-4.0	500	36	13.14	11.72	73.42 ^E	112.33 ^E	1530/	1000	1	NA	Yue et al., 2013
512	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	HSH	5	Natural	-4.9	403	36	12.06	8.83	41.12	121.29	2950/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
513	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSH	3	Natural	-4.9	403	36	12.67	9.60	44.38	135.36	3050/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
514	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	5	Natural	-4.9	403	36	13.58	10.08	56.80	171.83	3025/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
515	Heilongjiang	Maorshan Forest Farm	45°23'N	127°32'E	300	NA	NA	Planted	2.7	729	37	19.50	20.20	301.11 ^E	258.95 ^E	860/0.70	NA	1	1994	Cui et al., 2000
516	Heilongjiang	Tahe Forest Bureau	52°46'N	124°34'E	1167	HSU	10-12	Natural	-5.0	428	37	10.97	13.21	73.65 ^E	154.67 ^E	2100/	400	3	2010	Di et al., 2012; Lu et al., 2013; Jiang et al., 2012
517	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	37	13.16	11.30	68.99 ^E	206.98 ^E	3000/0.95	NA	1	1989	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
518	Heilongjiang	Maorshan Forest Farm	45°25'N	127°38'E	300	HSU	4	Planted	2.8	700	37	20.74	21.37	356.86 ^E	330.10 ^E	925/0.70	400	1	2008	Li et al., 2010b; c
519	Heilongjiang	Nanwenghe Ecological Station	51°22'N	125°29'E	650	NA	NA	Natural	-3.0	500	37	11.33	14.15	86.26 ^E	NA	NA	400	3	2010	Lu et al., 2013
520	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	HSH	10	Natural	-4.9	403	37	11.22	4.88	48.16	128.82	2675/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
521	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	37	NA	NA	35.63	163.00	4575/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
522	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	38	13.23	11.55	65.80	197.40	3000/1.00	NA	1	1990	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
523	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	38	13.50	14.11	104.90	210.85	2010/0.90	NA	1	1990	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
524	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	38	13.80	13.48	95.10	142.65	1500/0.85	NA	1	1990	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
525	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	38	15.23	16.36	150.10	150.85	1005/0.75	NA	1	1990	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
526	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	38	15.33	18.61	205.10	104.60	510/0.65	NA	1	1990	Dong, 2001; Bi, 2001; Li, 1993; Yang et al., 2002*
527	Inner Mongolia	Chaocha Forest Farm	50°53'N	121°34'E	840	HSH	30	Natural	-5.4	500	38	6.85	4.80	7.23 ^E	51.50 ^E	7125/0.78	400	1	NA	Wang et al., 2013c
528	Heilongjiang	Xinlin Forest Farm	51°39'N	124°26'E	705	NA	6	Natural	-2.6	514	38	NA	13.70	99.83 ^E	105.12 ^E	1053/	400	1	NA	Xiao & Yang, 2014
529	Heilongjiang	Beiji Village	53°27'N	122°21'E	400	SU	3	Natural	-5.4	500	38	13.30	21.50	216.42 ^E	205.60 ^E	950/0.83	600	3	2009	Xu et al., 2011a; 2013
530	Inner Mongolia	Wuerqihan Forest Bureau	49°34'N	121°24'E	709	NA	NA	Natural	-1.5	386	38	9.60	8.50	37.92	109.20	2880/	NA	1	1985	Xue, 1987b; Wu, 2015*
531	Heilongjiang	Dongzhelenghe Forest Farm	46°41'N	129°05'E	350	HSU	16	Planted	0.4	618	38	21.00	20.50	390.08	312.07	800/0.50	600	1	2006	Zhang, 2008a; Zhang et al., 2008; Xu, 2009
532	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	HSU	5	Natural	-4.9	403	38	14.26	10.83	89.56	273.17	3050/	NA	NA	NA	Zhai et al., 1990a; b; Zhao et al., 1999*
533	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	HSU	5	Natural	-4.9	403	38	14.10	11.20	72.14	214.63	2975/	NA	NA	NA	Zhai et al., 1990a; b; Zhao et al., 1999*
534	Heilongjiang	Mohe Forest Farm	53°28'N	123°43'E	387	HSU	5	Natural	-4.9	403	38	12.62	9.54	44.41	98.58	2220/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
535	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	5	Natural	-4.9	403	38	10.75	7.98	26.73	87.54	3275/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
536	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSH	10	Natural	-4.9	403	38	13.88	11.74	63.35	171.04	2700/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
537	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	38	10.20	7.70	60.74	108.30	1783/	600-1500	1	1993	Zhao et al., 1996; Hong et al., 1994*
538	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	38	11.50	15.80	105.77	130.10	1230/	600-1500	1	1993	Zhao et al., 1996; Hong et al., 1994*
539	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	38	NA	NA	33.21	137.00	4125/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*

540	Heilongjiang	Maorshan Forest Farm	45°21'N	127°35'E	379	SU	7	Planted	2.8	724	38	18.20	15.40	172.62 ^E	198.51 ^E	1150/0.70	400	1	2003	Zhu et al., 2006
541	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	874	SU	NA	Natural	-5.4	500	39	4.27	6.58	7.31 ^E	28.97 ^E	3963/	1600	1	NA	Gao, 2014
542	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	1000	HSU	20	Natural	-5.4	500	39	10.50	10.10	43.69 ^E	66.97 ^E	1533/	254	1	NA	Yu et al., 2008
543	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	880	HSU	5	Natural	-5.4	500	39	13.60	12.40	84.37 ^E	82.93 ^E	983/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
544	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	10	Natural	-4.9	403	39	12.80	10.20	43.61	113.38	2600/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
545	Heilongjiang	Pangu Forest Farm	52°47'N	122°47'E	450	NA	NA	Natural	-2.4	500	40	20.40	16.90	231.76 ^E	238.72 ^E	1030/0.62	600	1	2009	Chu, 2011 ; Chu et al., 2011
546	Heilongjiang	Pangu Forest Farm	52°47'N	122°47'E	450	NA	NA	Natural	-2.4	500	40	19.10	18.40	249.52 ^E	270.73 ^E	1085/0.52	600	1	2009	Chu, 2011 ; Chu et al., 2011
547	Heilongjiang	Jinshan Forest Farm	51°51'N	126°26'E	300	FL	0	Natural	-2.4	460	40	NA	12.10	93.18	205.00	2200/	NA	1	NA	Gu, 1985a; Zhao et al., 1999*
548	Heilongjiang	Maorshan Forest Farm	45°20'N	127°34'E	340	SU	5-6	Planted	2.8	724	40	20.10	19.20	285.16 ^E	327.93 ^E	1150/	1160	1	2008	Qiu, 2011; Qiu et al., 2011
549	Inner Mongolia	Aershan Forest Bureau	47°17'N	119°51'E	886	NA	NA	Planted	-3.3	425	40	11.00	14.00	107.85	158.00	1465/	NA	NA	2000	Ren, 2010; Yang et al., 2002*
550	Inner Mongolia	Guyinghe Forest Farm	47°59'N	121°12'E	1025	HSH	17	Natural	-3.4	450	40	16.42	20.83	260.82 ^E	193.01 ^E	740/	1000	1	NA	Ren et al., 2013
551	Inner Mongolia	Dalaigou Forest Farm	51°19'N	121°28'E	850	HSU	15	Natural	-6.1	428	40	9.67	11.32	48.56 ^E	40.79 ^E	840/	1000	1	NA	Yue et al., 2014
552	Inner Mongolia	Dalaigou Forest Farm	51°19'N	121°28'E	832	HSU	15	Natural	-6.1	428	40	8.23	8.43	24.03 ^E	31.96 ^E	1330/	1000	1	NA	Yue et al., 2014
553	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	6	Natural	-4.9	403	40	14.24	10.34	44.49	136.82	3075/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
554	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	HSH	3	Natural	-4.9	403	40	12.59	8.58	38.56	132.08	3425/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
555	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	6	Natural	-4.9	403	40	13.44	12.22	77.91	202.55	2600/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
556	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	40	10.50	7.70	32.54	139.10	4275/	NA	1	1993	Zhao et al., 1996; Hong et al., 1994*
557	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	40	13.50	9.00	47.62 ^E	120.62 ^E	2533/	600	1	2011	Zhu et al., 2013; Zhu, 2013
558	Heilongjiang	Pangu Forest Farm	52°47'N	122°47'E	450	NA	NA	Natural	-2.4	500	41	19.50	17.80	241.07 ^E	268.79 ^E	1115/0.57	600	1	2009	Chu, 2011 ; Chu et al., 2011
559	Inner Mongolia	Jinhe Forest Bureau	51°16'N	121°26'E	800	NA	NA	Natural	-5.0	437	41	6.70	5.70	12.81	46.10	3600/	NA	1	1981	Xue, 1987b; Cheng & Li, 1989*
560	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	41	10.00	4.00	8.10 ^E	19.52 ^E	2409/	NA	1	1981	Xue, 1987b; Yang et al., 2002*
561	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	41	10.40	9.70	63.34	135.10	2133/	600-1500	1	1993	Zhao et al., 1996; Hong et al., 1994*
562	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	812	SU	NA	Natural	-5.4	500	42	8.07	8.92	25.94 ^E	102.74 ^E	3960/	900	1	NA	Gao, 2014
563	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	42	16.17	14.33	132.76 ^E	102.89 ^E	775/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
564	Heilongjiang	Tonghe County	46°07'N	129°01'E	166	NA	NA	Planted	3.5	656	42	NA	16.59	167.55 ^E	225.18 ^E	1344/	900	3	NA	Song, 2013; Zhu, 2008*
565	Heilongjiang	Yilin Forest Farm	52°56'N	123°20'E	650	NA	6	Natural	-2.6	514	42	NA	17.30	187.81 ^E	239.46 ^E	1275/	400	1	NA	Xiao & Yang, 2014
566	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	850	HSU	5	Natural	-5.4	500	42	10.00	10.10	43.20	67.95	1573/	254	1	NA	Yu et al., 2010; 2011
567	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	6	Natural	-4.9	403	42	13.08	11.08	75.08	217.73	2900/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
568	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	819	NA	NA	Natural	-5.4	500	43	8.56	6.88	17.59 ^E	90.64 ^E	5154/	900	1	2012	Gao et al., 2014
569	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	HSH	3	Natural	-4.9	403	43	11.84	8.97	50.05	163.93	3275/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*

570	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	HSH	10	Natural	-4.9	403	43	12.80	10.40	47.41	130.38	2750/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
571	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	43	14.10	15.00	134.66	118.50	880/	600-1500	1	1993	Zhao et al., 1996; Hong et al., 1994*
572	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	877	SU	NA	Natural	-5.4	500	44	8.27	8.87	26.42 ^E	83.94 ^E	3177/	900	1	NA	Gao, 2014
573	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	44	21.67	19.40	316.63 ^E	292.88 ^E	925/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
574	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	44	19.90	32.20	699.72 ^E	542.28 ^E	775/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
575	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	44	NA	10.20	73.60	212.20	2883/	600-1500	1	1986	Hong et al., 1994
576	Heilongjiang	Aihui District	50°42'N	126°35'E	467	NA	NA	Planted	-2.0	577	44	NA	19.75	269.88 ^E	219.68 ^E	814/	900	3	NA	Song, 2013; Wang, 2003*
577	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	44	NA	NA	63.77	173.00	2713/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
578	Inner Mongolia	Aershan Forest Bureau	47°30'N	120°15'E	1102	HSH	6-15	Planted	-3.3	425	45	17.70	20.00	264.71 ^E	NA	/0.85	600	3	NA	Chen & Xiao, 2006
579	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	45	15.90	13.80	121.86 ^E	76.16 ^E	625/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
580	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	45	22.37	19.67	336.49 ^E	269.19 ^E	800/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
581	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	45	21.50	18.67	293.31 ^E	190.65 ^E	650/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
582	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	45	NA	13.10	91.14	151.30	1660/	600-1500	1	1986	Hong et al., 1994
583	Heilongjiang	Yilin Forest Farm	52°21'N	122°41'E	910	NA	6	Natural	-2.6	514	45	NA	12.70	81.46 ^E	161.13 ^E	1978/	400	1	NA	Xiao & Yang, 2014
584	Inner Mongolia	Jinhe Forest Bureau	51°16'N	121°26'E	800	NA	NA	Natural	-5.0	437	45	7.50	5.90	13.61	49.00	3600/	NA	1	1985	Xue, 1987b; Cheng & Li, 1989*
585	Inner Mongolia	Genhe Forest Bureau	50°41'N	121°57'E	980	NA	NA	Natural	-5.0	436	45	11.50	7.00	49.48	119.20	2409/	NA	1	1985	Xue, 1987b; Yang et al., 2002*
586	Inner Mongolia	Yulin Forest Farm	48°26'N	121°22'E	930	NA	NA	Natural	-3.4	462	45	15.20	12.50	95.50	188.10	1970/	NA	1	1980	Xue, 1987b; Yang et al., 2002*
587	Inner Mongolia	Yulin Forest Farm	48°26'N	121°22'E	930	NA	NA	Natural	-3.4	462	45	16.40	14.60	133.00	199.50	1500/	NA	1	1980	Xue, 1987b; Yang et al., 2002*
588	Inner Mongolia	Yulin Forest Farm	48°26'N	121°22'E	930	NA	NA	Natural	-3.4	462	45	18.70	13.20	127.50	149.20	1170/	NA	1	1980	Xue, 1987b; Yang et al., 2002*
589	Inner Mongolia	Yulin Forest Farm	48°26'N	121°22'E	930	NA	NA	Natural	-3.4	462	45	18.60	15.10	164.50	289.50	1760/	NA	1	1980	Xue, 1987b; Yang et al., 2002*
590	Inner Mongolia	Dalaigou Forest Farm	51°19'N	121°28'E	816	HSU	10	Natural	-6.1	428	45	11.42	12.32	68.23 ^E	92.12 ^E	1350/	1000	1	NA	Yue et al., 2014
591	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	6	Natural	-4.9	403	45	11.75	9.10	35.00	120.75	3450/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
592	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	HSH	7	Natural	-4.9	403	45	16.96	12.96	112.14	263.53	2350/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
593	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	45	12.80	9.50	49.26 ^E	98.51 ^E	2000/	600	1	2011	Zhu et al., 2013; Zhu, 2013
594	Heilongjiang	Dailing Forest Bureau	47°08'N	129°06'E	504	HSU	8	Planted	1.3	660	46	21.00	20.00	322.20 ^E	NA	/0.50	NA	NA	2004	Dong, 2008; Dong et al., 2007
595	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	823	SU	NA	Natural	-5.4	500	46	8.02	8.41	23.23 ^E	56.05 ^E	2413/	1600	1	NA	Gao, 2014
596	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	46	19.73	18.33	257.27 ^E	154.36 ^E	600/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
597	Heilongjiang	Dailing Forest Bureau	47°08'N	129°06'E	504	HSU	23	Planted	1.3	660	47	22.00	22.00	401.91 ^E	NA	/0.60	NA	NA	2004	Dong, 2008
598	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	845	SU	NA	Natural	-5.4	500	47	6.69	8.80	20.42 ^E	67.90 ^E	3325/	1600	1	NA	Gao, 2014
599	Heilongjiang	Haerbin City	45°43'N	126°37'E	142	NA	<15	Planted	3.5	534	47	22.00	18.00	136.25	117.72	864/0.80	NA	NA	2005	Meng et al., 2009; An, 2011

600	Heilongjiang	Haerbin City	45°43'N	126°37'E	142	NA	NA	Planted	3.5	534	47	16.95	17.80	146.28	149.50	1022/	600	1	2008	Sun et al., 2009; 2011
601	Heilongjiang	Yilin Forest Farm	52°21'N	122°42'E	840	NA	6	Natural	-2.6	514	47	NA	13.20	90.34 ^E	92.42 ^E	1023/	400	1	NA	Xiao & Yang, 2014
602	Heilongjiang	Maorshan Ecological Station	45°26'N	127°34'E	300	HSU	7	Planted	2.8	737	47	NA	15.10	129.79 ^E	236.60 ^E	1823/	600	3	2004	Yang & Wang, 2005;2007; Wang, 2006
603	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	5	Natural	-4.9	403	47	13.16	9.52	56.94	153.75	2700/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
604	Heilongjiang	Maorshan Ecological Station	45°24'N	127°40'E	400	SU	10-15	Planted	3.1	629	48	19.53	23.07	381.01 ^E	698.39 ^E	1833/	NA	NA	2012	Cheng, 2015
605	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	854	SU	NA	Natural	-5.4	500	48	9.7	9.27	34.30 ^E	28.57 ^E	833/	900	1	NA	Gao, 2014
606	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	812	NA	NA	Natural	-5.4	500	48	9.02	7.02	19.35 ^E	76.63 ^E	3960/	900	1	2012	Gao et al., 2014
607	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	48	21.50	19.33	311.78 ^E	303.99 ^E	975/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
608	Heilongjiang	Maorshan Ecological Station	45°20'N	127°30'E	400	NA	10-15	Planted	2.8	737	48	21.19	19.36	307.46 ^E	348.35 ^E	1133/	300	1	NA	Liu et al., 2014
609	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	950	HSH	60	Natural	-5.4	500	48	10.10	8.70	37.11	87.54	2359/	254	1	NA	Yu et al., 2010; 2011
610	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	48	NA	NA	103.62	206.00	1988	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
611	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	48	NA	NA	67.46	210.00	3113/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
612	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	819	HSU	NA	Natural	-5.4	500	49	8.59	10.02	34.20 ^E	18.60 ^E	544/	1600	1	NA	Gao, 2014
613	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	49	NA	8.20	35.85	116.50	3250/	600-1500	1	1986	Hong et al., 1994
614	Inner Mongolia	Chaocha Forest Farm	50°51'N	121°32'E	816	HSH	12	Natural	-5.4	500	49	10.50	9.20	37.07 ^E	240.06 ^E	6475/0.82	400	1	NA	Wang et al., 2013c
615	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	807	SH	NA	Natural	-5.4	500	50	8.06	9.38	28.30 ^E	69.17 ^E	2444/	900	1	NA	Gao, 2014
616	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	50	21.97	20.40	351.39 ^E	289.90 ^E	825/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
617	Heilongjiang	Maorshan Ecological Station	45°24'N	127°40'E	400	HSU	3	Planted	3.1	629	50	NA	18.60	228.93 ^E	324.40 ^E	1417/	600	3	NA	Li, 2013b; Quan et al., 2010;
618	Heilongjiang	Maorshan Forest Farm	45°25'N	127°38'E	300	HSH	30	Planted	2.8	700	50	29.30	28.49	880.25 ^E	975.32 ^E	1108/0.70	400	1	2007	Wu et al., 2009
619	Heilongjiang	Maorshan Forest Farm	45°25'N	127°38'E	300	HSH	30	Planted	2.8	700	50	27.60	26.85	740.44 ^E	949.98 ^E	1283/0.70	400	1	2007	Wu et al., 2009
620	Heilongjiang	Maorshan Forest Farm	45°25'N	127°38'E	300	HSH	30	Planted	2.8	700	50	22.30	25.04	512.55 ^E	664.26 ^E	1296/0.80	400	1	2007	Wu et al., 2009
621	Heilongjiang	Maorshan Forest Farm	45°25'N	127°38'E	300	HSH	30	Planted	2.8	700	50	20.10	21.01	334.10 ^E	467.74 ^E	1400/0.90	400	1	2007	Wu et al., 2009
622	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	6	Natural	-4.9	403	50	10.29	9.59	46.17	151.22	3275/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
623	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSU	7	Natural	-4.9	403	50	14.32	12.12	89.50	241.66	2700/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
624	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	50	8.80	9.70	33.21 ^E	NA	NA	600	1	2011	Zhang, 2013; Hong et al., 1994*
625	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	50	NA	NA	81.25	260.00	3200/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
626	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	50	NA	NA	95.81	206.00	2150/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
627	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	51	NA	11.00	80.81	230.30	2850/	600-1500	1	1993	Hong et al., 1994
628	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	890	NA	NA	Natural	-5.4	500	51	7.70	7.70	18.98 ^E	58.95 ^E	3106/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
629	Heilongjiang	Gulian Forest Farm	52°57'N	122°21'E	508	SH	5	Natural	-4.9	403	51	11.00	10.10	57.73	167.41	2900/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*

630	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	51	NA	NA	166.13	206.00	1240/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
631	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	837	SU	NA	Natural	-5.4	500	52	5.44	7.85	13.17 ^E	47.19 ^E	3583/	600	1	NA	Gao, 2014
632	Heilongjiang	Lilin Forest Farm	48°05'N	129°07'E	430	NA	NA	Planted	0.2	627	52	25.33	26.10	638.27 ^E	446.79 ^E	700/	400	1	2010	Guo & Jiang, 2015; Guo, 2015
633	Inner Mongolia	Guyinghe Forest Farm	47°59'N	121°12'E	860	HSH	9	Natural	-3.4	450	52	15.96	27.38	408.26 ^E	155.14 ^E	380/	1000	1	NA	Ren et al., 2013
634	Heilongjiang	Jingou Forest Farm	53°17'N	122°10'E	580	HSH	NA	Natural	-4.9	403	52	13.72	10.26	55.58	155.62	2800/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
635	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSH	7	Natural	-4.9	403	52	14.98	12.08	99.79	289.39	2900/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
636	Heilongjiang	Jingou Forest Farm	53°17'N	122°10'E	580	HSU	3	Natural	-4.9	403	52	14.64	10.52	64.41	181.96	2825/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
637	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	52	15.30	13.70	106.75	170.80	1600/	600-1500	1	1993	Zhao et al., 1996; Hong et al., 1994*
638	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	861	SU	NA	Natural	-5.4	500	53	8.44	8.96	27.53 ^E	70.10 ^E	2546/	900	1	NA	Gao, 2014
639	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	53	NA	8.30	41.83	166.80	3988/	600-1500	1	1986	Hong et al., 1994
640	Inner Mongolia	Xiaojiuya Forest Farm	50°00'N	122°04'E	745	HSU	2	Natural	-4.0	500	53	20.76	20.72	338.37 ^E	253.78 ^E	750/	1000	1	NA	Yue et al., 2013
641	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	53	13.20	10.40	59.83 ^E	NA	NA	600	1	2011	Zhang, 2013; Hong et al., 1994*
642	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	53	NA	NA	237.04	256.00	1080/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
643	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	53	NA	NA	77.87	183.00	2350/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
644	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	53	9.50	8.80	30.56 ^E	50.94 ^E	1667/	600	1	2011	Zhu et al., 2013; Zhu, 2013
645	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	845	NA	NA	Natural	-5.4	500	54	11.27	9.46	42.24 ^E	80.25 ^E	1900/	900	1	2012	Gao et al., 2014
646	Heilongjiang	Liangshui Nature Reserve	47°11'N	128°53'E	400	NA	NA	Planted	-0.3	676	54	23.04	24.80	523.21 ^E	266.84 ^E	510/0.80	2000	1	2007	Wu et al., 2008; Sheng et al., 2009
647	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	930	HSU	15	Natural	-5.4	500	54	7.40	9.30	24.93	49.01	1966/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
648	Heilongjiang	Jingou Forest Farm	53°17'N	122°10'E	580	HSH	3	Natural	-4.9	403	54	13.65	10.75	68.22	143.27	2100/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
649	Heilongjiang	Jingou Forest Farm	53°17'N	122°10'E	580	HSU	3	Natural	-4.9	403	54	15.94	11.86	104.52	243.01	2325/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
650	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	54	NA	NA	72.11	265.00	3675/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
651	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	54	NA	NA	92.09	198.00	2150/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
652	Inner Mongolia	Jiwen Forest Bureau	50°20'N	123°00'E	700	NA	NA	Natural	-1.7	483	55	9.60	8.70	31.97	79.92	2500/	NA	2	NA	Cheng & Li, 1989; Wang et al., 2001b
653	Inner Mongolia	Jiwen Forest Bureau	50°20'N	123°00'E	700	NA	NA	Natural	-1.7	483	55	18.60	20.40	257.25	140.20	545/	NA	7	NA	Cheng & Li, 1989; Wang et al., 2001b
654	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	803	SU	NA	Natural	-5.4	500	55	7.53	8.47	21.87 ^E	15.05 ^E	688/	1600	1	NA	Gao, 2014
655	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	803	NA	NA	Natural	-5.4	500	55	9.16	8.94	30.13 ^E	85.69 ^E	2844/	900	1	2012	Gao et al., 2014
656	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	821	HSH	7	Natural	-5.5	500	55	7.11	6.02	11.22 ^E	34.84 ^E	3106/0.70	10000	1	NA	Han et al., 2015a
657	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	55	NA	17.50	200.80	200.80	1000/	600-1500	1	1986	Hong et al., 1994
658	Heilongjiang	Liangshui Nature Reserve	47°11'N	128°53'E	410	HSU	3	Planted	-1.0	676	55	20.00	28.00	550.43 ^E	344.02 ^E	625/0.62	400	1	2009	Liu et al., 2012; Guan et al., 2013
659	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	55	NA	NA	201.94	208.00	1030/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*

660	Inner Mongolia	Jiwen Forest Bureau	50°20'N	123°00'E	700	NA	NA	Natural	-1.7	483	56	20.80	18.80	156.00	152.10	975/	NA	10	NA	Cheng & Li, 1989; Wang et al., 2001b
661	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	823	NA	NA	Natural	-5.4	500	56	9.27	9.31	32.81 ^E	60.13 ^E	1833/	900	1	2012	Gao et al., 2014
662	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	56	NA	8.10	24.50	64.50	2633/	600-1500	1	1986	Hong et al., 1994
663	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	1050	HSU	45	Natural	-5.4	500	56	9.20	9.00	28.24	35.53	1258/	254	1	NA	Yu & Wang, 2007
664	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	980	SU	20	Natural	-5.4	500	56	12.50	9.40	21.65	33.19	1533/	254	1	NA	Yu et al., 2010; Yu & Wang, 2007
665	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	1060	SH	30	Natural	-5.4	500	56	10.80	9.00	40.08	61.45	1533/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
666	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	56	NA	NA	114.52	209.00	1825/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
667	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	56	NA	NA	62.75	251.00	4000/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
668	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	56	9.50	9.00	42.25	137.30	3250/	600-1500	1	1993	Zhao et al., 1996; Hong et al., 1994*
669	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	837	NA	NA	Natural	-5.4	500	57	11.07	9.61	42.54 ^E	107.74 ^E	2533/	900	1	2012	Gao et al., 2014
670	Inner Mongolia	Wuerqihan Forest Farm	49°37'N	121°50'E	839	HSH	5	Natural	-1.5	386	57	14.99	17.64	175.40 ^E	159.62 ^E	910/	1000	1	NA	Wang et al., 2013b; Wu, 2015*
671	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	1005	SU	25	Natural	-5.4	500	58	9.30	9.20	24.59	26.11	1062/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
672	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	990	SH	25	Natural	-5.4	500	58	15.90	8.90	28.71	24.83	865/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
673	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	950	HSH	25	Natural	-5.4	500	58	10.00	10.40	27.03	29.76	1101/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
674	Heilongjiang	Qianshao Forest Farm	53°03'N	122°23'E	598	HSH	7	Natural	-4.9	403	58	14.92	10.80	71.10	209.74	2950/	NA	NA	NA	Zhai et al., 1990b; Zhao et al., 1999*
675	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	58	16.20	14.70	111.28	214.00	1923/	NA	11	1986	Zhao et al., 1996; Hong et al., 1994*
676	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	58	NA	NA	63.88	206.00	3225/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
677	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	1000	SU	25	Natural	-5.4	500	59	10.90	10.10	23.74	16.81	708/	254	1	NA	Yu et al., 2008
678	Inner Mongolia	Guyinghe Forest Farm	47°59'N	121°12'E	837	HSH	27	Natural	-3.4	450	60	12.35	15.71	114.40 ^E	123.55 ^E	1080/	1000	1	NA	Ren et al., 2013
679	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	985	NA	NA	Natural	-5.4	500	60	13.80	10.20	60.86 ^E	29.82 ^E	490/0.58	NA	NA	NA	Song et al., 2008a
680	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	900	HSH	15	Natural	-5.4	500	60	9.20	11.80	33.15	74.29	2241/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
681	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	60	11.60	10.60	59.80	130.00	2174/	NA	25	1986	Zhao et al., 1996; Hong et al., 1994*
682	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	60	13.30	13.00	82.44	185.00	2244/	NA	11	1986	Zhao et al., 1996; Hong et al., 1994*
683	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	60	13.20	8.60	50.74	185.20	3650/	600-1500	1	1993	Zhao et al., 1996; Hong et al., 1994*
684	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	816	NA	NA	Natural	-5.4	500	61	10.12	10.51	44.91 ^E	90.31 ^E	2011/	900	1	2012	Gao et al., 2014
685	Heilongjiang	Huzhong Forest Bureau	51°50'N	123°30'E	812	NA	<5	Planted	-4.4	482	61	21.69	34.89	889.76 ^E	271.08 ^E	305/	400	3	2009	Qi et al., 2011; 2013; Hu et al., 2012*
686	Heilongjiang	Talin Forest Farm	52°21'N	123°20'E	1095	NA	6	Natural	-2.6	514	61	NA	15.80	146.74 ^E	202.51 ^E	1380/	400	1	NA	Xiao & Yang, 2014
687	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	1050	SU	45	Natural	-5.4	500	61	12.80	9.70	51.41	105.14	2045/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
688	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	920	SU	22	Natural	-5.4	500	61	14.40	9.60	36.00	11.34	315/	254	1	NA	Yu et al., 2010; 2011
689	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	62	NA	20.60	303.42	221.50	730/	600-1500	1	1993	Hong et al., 1994

690	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	1030	SH	30	Natural	-5.4	500	62	12.90	9.80	44.22	74.77	1691/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
691	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	62	NA	NA	299.14	347.00	1160/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
692	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	63	NA	11.90	76.60	150.90	1970/	600-1500	1	1986	Hong et al., 1994
693	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	1050	SH	30	Natural	-5.4	500	63	8.70	8.10	17.93	26.78	1494/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
694	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	63	14.20	12.70	81.26	186.00	2289/	NA	14	1986	Zhao et al., 1996; Hong et al., 1994*
695	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	63	9.50	7.50	37.58	85.80	2283/	600-1500	1	1993	Zhao et al., 1996; Hong et al., 1994*
696	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	64	NA	NA	189.71	387.00	2040/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
697	Inner Mongolia	Genhe Ecological Station	50°50'N	121°30'E	900	SU	10	Natural	-5.4	500	65	8.20	7.80	18.71	52.25	2792/	254	1	NA	Yu et al., 2008; 2010; Yu & Wang, 2007
698	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	65	10.80	10.80	50.77 ^E	NA	NA	600	1	2011	Zhang, 2013; Hong et al., 1994*
699	Heilongjiang	Talin Forest Farm	52°21'N	123°20'E	1095	NA	6	Natural	-2.6	514	66	NA	18.40	222.26 ^E	208.26 ^E	937/	400	1	NA	Xiao & Yang, 2014
700	Heilongjiang	Talin Forest Farm	52°22'N	123°22'E	1140	NA	6	Natural	-2.6	514	67	NA	15.30	134.49 ^E	138.80 ^E	1032/	400	1	NA	Xiao & Yang, 2014
701	Inner Mongolia	Chaocha Forest Farm	50°50'N	121°31'E	842	NA	NA	Natural	-5.4	500	68	16.80	13.20	120.07 ^E	288.16 ^E	2400/0.81	600	1	NA	Wang et al., 2013c
702	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	70	NA	12.50	89.16	159.60	1790/	600-1500	1	1993	Hong et al., 1994
703	Heilongjiang	Talin Forest Farm	52°22'N	123°21'E	1135	NA	6	Natural	-2.6	514	71	NA	17.10	181.95 ^E	211.06 ^E	1160/	400	1	NA	Xiao & Yang, 2014
704	Inner Mongolia	Xiaojiuya Forest Farm	50°00'N	122°04'E	925	HSU	7	Natural	-4.0	500	71	16.58	16.58	176.54 ^E	118.28 ^E	670/	1000	1	NA	Yue et al., 2013
705	Heilongjiang	Talin Forest Farm	52°22'N	123°21'E	1135	NA	6	Natural	-2.6	514	72	NA	22.40	381.79 ^E	329.48 ^E	863/	400	1	NA	Xiao & Yang, 2014
706	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	74	NA	13.60	104.19	129.20	1240/	600-1500	1	1986	Hong et al., 1994
707	Inner Mongolia	Tulihe Forest Bureau	50°24'N	121°42'E	800	NA	NA	Natural	-5.0	451	75	8.90	7.20	24.11	89.20	3700/	NA	2	NA	Cheng & Li, 1989; Wang et al., 2001b
708	Heilongjiang	Bishui Forest Farm	51°42'N	123°48'E	810	NA	6	Natural	-2.6	514	76	NA	24.40	483.79 ^E	417.99 ^E	864/	400	1	NA	Xiao & Yang, 2014
709	Heilongjiang	Bishui Forest Farm	51°42'N	123°48'E	810	NA	6	Natural	-2.6	514	77	NA	23.70	446.28 ^E	281.16 ^E	630/	400	1	NA	Xiao & Yang, 2014
710	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	78	20.80	18.50	278.55	261.00	937/	10000	1	1954	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
711	Heilongjiang	Bishui Forest Farm	51°42'N	123°48'E	810	NA	6	Natural	-2.6	514	78	NA	21.60	345.31 ^E	370.86 ^E	1074/	400	1	NA	Xiao & Yang, 2014
712	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	78	11.71	10.00	48.66 ^E	80.29 ^E	1650/	600	1	2011	Zhu et al., 2013; Zhu, 2013
713	Inner Mongolia	Wuerqihan Forest Farm	49°37'N	121°50'E	846	HSH	7	Natural	-1.5	386	79	13.01	17.01	139.65 ^E	150.83 ^E	1080/	1000	1	NA	Wang et al., 2013b; Wu, 2015*
714	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	80	13.10	11.00	65.46 ^E	NA	NA	600	1	2011	Zhang, 2013; Hong et al., 1994*
715	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	80	10.20	12.90	64.97 ^E	76.34 ^E	1175/	2000	1	2011	Zhu et al., 2013; Zhu, 2013
716	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	FL	0	Natural	-2.8	428	81	NA	13.70	119.73	134.10	1120/	600-1500	1	1993	Hong et al., 1994
717	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	81	19.60	18.20	242.34	269.00	1110/	10000	1	1954	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
718	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	83	9.40	8.90	30.80 ^E	85.71 ^E	2783/	600	1	2011	Zhu et al., 2013; Zhu, 2013
719	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	83	11.69	9.89	47.63 ^E	157.19 ^E	3300/	600	1	2011	Zhu et al., 2013; Zhu, 2013

720	Inner Mongolia	Genhe Ecological Station	50°56'N	121°30'E	920	NA	NA	Natural	-5.4	500	85	11.20	9.80	44.62 ^E	81.03 ^E	1816/	200	3	2010	Du & Fang, 2014
721	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	86	22.30	21.40	389.54	298.00	765/	10000	1	1954	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
722	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	88	22.90	18.50	297.56	366.00	1230/	10000	1	1954	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
723	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	90	19.80	22.00	379.84	245.00	645/	10000	1	1954	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
724	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	90	NA	NA	229.68	356.00	1550/	NA	1	1986	Zhao et al., 1996; Hong et al., 1994*
725	Heilongjiang	Bishui Forest Farm	51°43'N	123°48'E	820	NA	6	Natural	-2.6	514	91	NA	24.30	478.31 ^E	364.47 ^E	762/	400	1	NA	Xiao & Yang, 2014
726	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	93	23.70	24.60	470.42	326.00	693/	10000	1	1954	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
727	Inner Mongolia	Tulihe Forest Bureau	50°24'N	121°42'E	800	NA	NA	Natural	-5.0	451	94	14.90	16.90	170.88	89.20	522/	NA	2	NA	Cheng & Li, 1989; Wang et al., 2001b
728	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	94	22.00	22.00	395.77	281.00	710/	10000	1	1954	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
729	Inner Mongolia	Chaocha Forest Farm	50°50'N	121°31'E	839	NA	NA	Natural	-5.4	500	96	20.20	22.00	364.35 ^E	400.78 ^E	1100/0.64	600	1	NA	Wang et al., 2013c
730	Heilongjiang	Amuer Forest Bureau	52°54'N	123°21'E	555	SU	22	Natural	-5.0	455	~100	17.89	18.43	232.10 ^E	NA	/0.70	600	1	2011	Han et al., 2012b; 2015
731	Heilongjiang	Tahe Forest Bureau	52°44'N	123°50'E	520	NA	10	Natural	-3.0	425	100-120	21.00	23.00	411.96 ^E	289.19 ^E	702/	400	3	1998	Wang et al., 2001a
732	Heilongjiang	Tahe Forest Bureau	52°44'N	123°50'E	520	NA	10	Natural	-3.0	425	100-120	10.99	15.48	97.46 ^E	130.60 ^E	1340/	1000	3	1998	Wang et al., 2001a
733	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	101	22.40	21.90	408.11	302.00	740/	10000	1	1978	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
734	Heilongjiang	Pangu Forest Farm	52°42'N	123°52'E	573	NA	NA	Natural	-2.8	428	103	11.68	13.00	76.96 ^E	125.68 ^E	1633/	600	1	2011	Zhu et al., 2013; Zhu, 2013
735	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	104	24.30	22.40	476.67	286.00	600/	10000	1	1978	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
736	Inner Mongolia	Tulihe Forest Bureau	50°24'N	121°42'E	800	NA	NA	Natural	-5.0	451	105	21.30	22.40	335.32	247.80	739/	NA	4	NA	Cheng & Li, 1989; Wang et al., 2001b
737	Inner Mongolia	Chaocha Forest Farm	50°50'N	121°31'E	842	NA	NA	Natural	-5.4	500	107	8.10	8.00	25.60	75.10	2934/	600	1	NA	Feng & Yang, 1985
738	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	109	25.30	24.60	525.82	336.00	639/	10000	1	1978	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
739	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	111	26.20	22.30	433.73	360.00	830/	10000	1	1978	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
740	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	113	23.60	26.50	559.57	263.00	470/	10000	1	1978	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
741	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	116	27.10	27.50	668.41	383.00	573/	10000	1	1978	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
742	Heilongjiang	Nanwenghe Nature Reserve	51°22'N	125°29'E	600	NA	NA	Natural	-3.0	500	117	26.20	26.40	560.21	321.00	573/	10000	1	1978	Li et al., 1979; Gu, 1985b; Lu et al., 2013*
743	Inner Mongolia	Jinhe Forest Bureau	51°16'N	121°26'E	800	NA	NA	Natural	-5.0	437	120	12.70	12.90	68.86	94.20	1368/	NA	3	NA	Cheng & Li, 1989; Wang et al., 2001b
744	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	985	NA	12	Natural	-5.4	500	120-150	22.48	24.28	490.02 ^E	355.26 ^E	725/	400	1	2007	Ma, 2009
745	Heilongjiang	Huzhong Forest Bureau	51°50'N	123°30'E	812	NA	<5	Natural	-4.4	482	>120	10.24	14.95	84.59 ^E	143.79 ^E	1700/	400	3	2009	Qi et al., 2013; Hu et al., 2012*
746	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	130	NA	22.50	332.40	202.10	608/	600-1500	1	1986	Hong et al., 1994
747	Inner Mongolia	Jinhe Forest Bureau	51°16'N	121°26'E	800	NA	NA	Natural	-5.0	437	131	24.20	28.60	658.43	285.10	433/	NA	2	NA	Cheng & Li, 1989; Wang et al., 2001b
748	Inner Mongolia	Chaocha Forest Farm	50°50'N	121°31'E	834	NA	NA	Natural	-5.4	500	132	20.60	28.20	576.63 ^E	351.74 ^E	610/0.56	1000	1	NA	Wang et al., 2013c
749	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	134	24.10	24.00	503.56	283.00	562/	10000	1	1954	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*

750	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	136	19.00	21.30	278.65	231.00	829/	NA	2	1986	Zhao et al., 1996; Hong et al., 1994*
751	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	137	24.00	25.90	559.80	220.00	393/	10000	1	1954	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*
752	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	137	19.20	22.90	376.01	213.20	567/	600-1500	1	1993	Zhao et al., 1996; Hong et al., 1994*
753	Inner Mongolia	Jinhe Forest Bureau	51°16'N	121°26'E	800	NA	NA	Natural	-5.0	437	140	21.20	24.60	403.71	141.30	350/	NA	5	NA	Cheng & Li, 1989; Wang et al., 2001b
754	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	142	18.70	21.40	207.08	228.00	1101/	NA	3	1986	Zhao et al., 1996; Hong et al., 1994*
755	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	147	27.50	28.20	738.76	345.00	467/	10000	1	1954	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*
756	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	152	15.40	18.40	216.35	217.00	1003/	NA	7	1986	Zhao et al., 1996; Hong et al., 1994*
757	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	153	26.20	26.10	612.72	318.00	519/	10000	1	1954	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*
758	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	158	25.60	26.80	601.43	252.00	419/	10000	1	1978	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*
759	Inner Mongolia	Qiqian Forest Bureau	52°12'N	120°48'E	800	NA	NA	Natural	-3.2	355	161	15.30	15.70	111.88	115.80	1035/	NA	2	NA	Cheng & Li, 1989; Wang et al., 2001b
760	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	161	23.00	29.10	732.67	222.00	303/	10000	1	1978	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*
761	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	161	20.50	22.30	380.05	160.00	421/	10000	1	1954	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*
762	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	171	29.00	31.10	934.84	330.00	353/	10000	1	1978	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*
763	Heilongjiang	Tahe Forest Bureau	52°46'N	124°14'E	520	NA	NA	Natural	-2.8	428	171	17.00	15.50	126.79	168.00	1325/	NA	2	1986	Zhao et al., 1996; Hong et al., 1994*
764	Inner Mongolia	Chaocha Forest Farm	50°50'N	121°31'E	842	NA	<5	Natural	-5.4	500	175	17.40	17.30	201.80	163.66	811/	900	1	NA	Feng & Yang, 1985
765	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	177	29.40	29.60	882.35	345.00	391/	10000	1	1978	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*
766	Inner Mongolia	Qiqian Forest Bureau	52°12'N	120°48'E	800	NA	NA	Natural	-3.2	355	180	24.70	32.50	769.01	163.80	213/	NA	2	NA	Cheng & Li, 1989; Wang et al., 2001b
767	Inner Mongolia	Jiageda Forest Farm	51°28'N	120°55'E	850	NA	NA	Natural	-5.3	355	185	22.50	26.80	518.99	164.00	316/	10000	1	1978	Li et al., 1979; Gu, 1985b; Zhang et al., 2009*
768	Inner Mongolia	Chaocha Forest Farm	50°50'N	121°31'E	842	NA	<20	Natural	-5.4	500	186	24.30	24.60	568.18	450.00	792/	1200	1	NA	Feng & Yang, 1985; Zhang & Zhou, 2014
769	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	1152	NA	5	Natural	-5.4	500	187	20.30	19.52	296.93 ^E	263.93 ^E	889/0.80	900	1	2006	Zhao, 2009
770	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	1148	NA	3	Natural	-5.4	500	194	20.20	19.83	303.54 ^E	242.83 ^E	800/0.78	900	1	2006	Zhao, 2009
771	Inner Mongolia	Genhe Ecological Station	50°50'N	121°31'E	1150	NA	4	Natural	-5.4	500	200	18.90	19.95	284.19 ^E	217.88 ^E	767/0.77	900	1	2006	Zhao, 2009
772	Inner Mongolia	Mangui Forest Bureau	51°46'N	121°55'E	650	HSH	10	Natural	-5.8	480	230	17.30	26.00	408.98 ^E	314.50 ^E	769/0.41	NA	2	1988	Xu & Du, 1993; Du et al., 1993
773	Inner Mongolia	Mangui Forest Bureau	51°46'N	121°55'E	640	HSU	15	Natural	-5.8	480	230	23.00	27.80	638.28 ^E	NA	/0.76	NA	1	1989	Xu & Du, 1993; Du et al., 1993
774	Inner Mongolia	Mangui Forest Bureau	51°46'N	121°55'E	690	HSH	10	Natural	-5.8	480	250	29.20	28.00	850.45 ^E	357.19 ^E	420/0.63	NA	NA	1988	Xu et al., 1990; Xu & Du, 1993*
775	Inner Mongolia	Mangui Forest Bureau	51°46'N	121°55'E	690	HSH	5	Natural	-5.8	480	260	26.50	31.50	935.73 ^E	NA	/0.68	NA	1	1989	Xu & Du, 1993; Du et al., 1993
776	Inner Mongolia	Mangui Forest Bureau	51°46'N	121°55'E	620	FL	0	Natural	-5.8	480	280	27.80	30.00	907.41 ^E	NA	/0.72	NA	1	1989	Xu & Du, 1993; Du et al., 1993