

TECHNICAL DOCUMENTATION REPORT

Intermountain Forest Tree
Nutrition Cooperative

April 1986

College of Forestry, Wildlife
and Range Sciences
University of Idaho
Moscow, Idaho 83843

TABLE OF CONTENTS

	<u>Page</u>
SECTION I. Experimental Design Statistical Models for Four-year Response.	1
SECTION II. The Relationships Between Basal Area at the Time of Treatment and the Growth Response Variables Documented in the Statistical Models in Section I	63
SECTION III. Summary Characteristics and Growth Response Estimates for each 1980 and 1981 Installation.	119
SECTION IV. Detailed Mensurational Summary of 1985 Ponderosa Pine Sites	169

SECTION I

Experimental Design Statistical Models for Four-year Response

- Table 1. Gross Basal Area Increment
- Table 2. Net Basal Area Increment
- Table 3. Height Increment
- Table 4. Gross Volume Increment
- Table 5. Net Volume Increment
- Table 6. Gross Basal Area Increment for the 9180 Installations
- Table 7. Net Basal Area Increment for the 1980 Installations
- Table 8. Height Increment for the 1980 Installations
- Table 9. Gross Volume Increment for the 1980 Installations
- Table 10. Net Volume Increment for the 1980 Installations
- Table 11. Four-year Basal Area Mortality
- Table 12. Four-year Volume Mortality

Table 1

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GBAI4 4 YR GROSS BASAL AREA GROWTH (SQ-FT/A)

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	111	9124.95570197	82.20680813	14.00	0.0001
ERRCR	182	1068.53433575	5.87106778		
CORRECTED TOTAL	293	10193.49003772			

R-SQUARE	C.V.	ROOT MSE	GBAI4 MEAN
0.895175	13.5118	2.42302864	17.93262490

SOURCE	DF	TYPE I SS	F VALUE	PR > F
REGION	5	2715.18077827	92.49	0.0001
INSTALLATION (REGION)	43	4277.32786767	16.94	0.0001
BLOCK (REGION*INSTALL)	49	443.58744138	1.54	0.0218
TREATMENT	2	1018.58592811	86.75	0.0001
REGION*TREATMENT	10	297.42514954	5.07	0.0001
BAO	1	306.71440882	52.24	0.0001
BAO*BAO	1	66.13412819	11.26	0.0010

SOURCE	DF	TYPE III SS	F VALUE	PR > F
REGION	5	1943.96267941	66.22	0.0001
INSTALLATION (REGION)	43	4587.53123631	18.17	0.0001
BLOCK (REGION*INSTALL)	49	364.19949532	1.27	0.1355
TREATMENT	2	981.32613198	83.57	0.0001
REGION*TREATMENT	10	256.34418577	4.37	0.0001
BAO	1	152.99916163	26.06	0.0001
BAO*BAO	1	66.13412819	11.26	0.0010

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	0.25401380	0.08	0.9367	3.19628978
REGION				
CEN IDAHO	3.09330487	1.47	0.1438	2.10724524
CEN WASHINGTON	0.92082618	0.44	0.6579	2.07629333
MONTANA	6.70358150	2.57	0.0109	2.60754920
N IDAHO	11.94983600	5.59	0.0001	2.13650027
NE OREGON	-2.35494675	-1.03	0.3060	2.29417123
NE WASHINGTON	0.00000000	.	.	.

Table 1 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GBA14

4 YR GROSS BASAL AREA GROWTH (SQ-FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INSTALLATION (REGION)				
103 CEN IDAHO	3.14182156	1.58	0.1159	1.98901142
201 CEN IDAHO	0.69248817	0.35	0.7286	1.99264945
202 CEN IDAHO	5.19185408	2.37	0.0189	2.19119859
203 CEN IDAHO	-1.51634480	-0.76	0.4457	1.98409350
219 CEN IDAHO	0.47416449	0.24	0.8110	1.97951717
220 CEN IDAHO	-3.33085130	-1.68	0.0947	1.98251426
221 CEN IDAHO	-3.26085947	-1.65	0.1011	1.97865026
222 CEN IDAHO	-1.39081621	-0.70	0.4865	1.99456179
223 CEN IDAHO	0.00000000	-	-	-
105 CEN WASHINGTON	2.82046517	1.42	0.1560	1.97993516
224 CEN WASHINGTON	5.32523279	2.68	0.0081	1.98764459
225 CEN WASHINGTON	7.74906867	3.89	0.0001	1.99136501
226 CEN WASHINGTON	5.67173525	2.73	0.0070	2.07900119
227 CEN WASHINGTON	2.68177038	1.31	0.1905	2.04110290
228 CEN WASHINGTON	3.78527133	1.91	0.0578	1.98255494
229 CEN WASHINGTON	5.31203175	2.66	0.0086	2.00005140
230 CEN WASHINGTON	1.71971388	0.86	0.3889	1.99112243
241 CEN WASHINGTON	13.29027732	6.64	0.0001	2.00292830
242 CEN WASHINGTON	0.00000000	-	-	-
231 MONTANA	-7.08826932	-3.27	0.0013	2.16729068
232 MONTANA	-5.23769160	-2.12	0.0352	2.46781812
233 MONTANA	-8.34068560	-3.36	0.0010	2.48407904
234 MONTANA	-7.35495042	-2.99	0.0032	2.45881429
235 MONTANA	-11.23026452	-4.72	0.0001	2.37750247
236 MONTANA				

Table 1 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
 GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GBAI4

4 YR GROSS BASAL AREA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
237 MONTANA	-16.39458671	-6.48	0.0001	2.53114201
238 MONTANA	-11.65621053	-4.76	0.0001	2.44631247
204 N IDAHO	0.00000000	.	.	.
205 N IDAHO	1.92913348	0.91	0.3647	2.12280020
206 N IDAHO	-1.07325551	-0.52	0.6062	2.07828035
208 N IDAHO	-2.76474411	-1.39	0.1648	1.98233281
240 N IDAHO	-16.65828219	-8.36	0.0001	1.99255369
240 N IDAHO	0.00000000	.	.	.
104 NE OREGON	9.15121730	4.07	0.0001	2.25037888
207 NE OREGON	1.70194748	0.81	0.4179	2.09622617
212 NE OREGON	5.38525942	2.37	0.0189	2.27356804
213 NE OREGON	-1.41327530	-0.63	0.5267	2.22807205
239 NE OREGON	-1.08502086	-0.55	0.5846	1.98100846
244 NE OREGON	-4.21494770	-1.49	0.1386	2.83336953
245 NE OREGON	0.00000000	.	.	.
106 NE WASHINGTON	9.36211408	4.55	0.0001	2.05946901
209 NE WASHINGTON	0.24554225	0.12	0.9014	1.97902663
210 NE WASHINGTON	-1.35355419	-0.68	0.4953	1.98100430
211 NE WASHINGTON	15.82015504	7.87	0.0001	2.01053635
214 NE WASHINGTON	10.93562485	5.31	0.0001	2.05786597
215 NE WASHINGTON	14.83249029	7.01	0.0001	2.11739357
216 NE WASHINGTON	-1.16499680	-0.59	0.5573	1.98137202
217 NE WASHINGTON	4.01351687	2.00	0.0475	2.01148839
218 NE WASHINGTON	5.14723408	2.50	0.0135	2.06283885
243 NE WASHINGTON	0.00000000	.	.	.
BLOCK (REGION*INSTALL)	1 CEN IDAHO	103		

Table 1 (continued)

FOUR-YEAR GROWTH MODELS—1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GBAI4

4 YR GROSS BASAL AREA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR H ₀ : PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-3.53589515	-1.78	0.0774	1.99118464
2 CEN IDAHO	103 0.00000000	-	-	-
1 CEN IDAHO	201 -0.93769001	-0.45	0.6526	2.07935687
2 CEN IDAHO	201 0.00000000	-	-	-
1 CEN IDAHO	202 -2.85397400	-1.42	0.1575	2.01065667
2 CEN IDAHO	202 0.00000000	-	-	-
1 CEN IDAHO	203 -1.42867951	-0.72	0.4717	1.98108460
2 CEN IDAHO	203 0.00000000	-	-	-
1 CEN IDAHO	219 0.88278942	0.45	0.6562	1.97995591
2 CEN IDAHO	219 0.00000000	-	-	-
1 CEN IDAHO	220 -1.10960678	-0.56	0.5757	1.97905029
2 CEN IDAHO	220 0.00000000	-	-	-
1 CEN IDAHO	221 -0.41269828	-0.21	0.8350	1.97876368
2 CEN IDAHO	221 0.00000000	-	-	-
1 CEN IDAHO	222 1.95331680	0.99	0.3254	1.98108300
2 CEN IDAHO	222 0.00000000	-	-	-
1 CEN IDAHO	223 3.53558106	1.78	0.0763	1.98354746
2 CEN IDAHO	223 0.00000000	-	-	-
1 CEN WASHINGTON	105 2.04251166	1.03	0.3049	1.98502831
2 CEN WASHINGTON	105 0.00000000	-	-	-
1 CEN WASHINGTON	224 1.49542032	0.75	0.4564	2.00341527
2 CEN WASHINGTON	224 0.00000000	-	-	-
1 CEN WASHINGTON	225 6.22718136	3.09	0.0023	2.01790024
2 CEN WASHINGTON	225 0.00000000	-	-	-
1 CEN WASHINGTON	226 0.79825916	0.40	0.6872	1.97903643
2 CEN WASHINGTON	226			

Table 1 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GBAI4

4 YR GROSS BASAL AREA GROWTH (SQ. FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.00000000			
1 CEN WASHINGTON	227			
	0.73805118	0.37	0.7097	1.97930374
2 CEN WASHINGTON	227			
	0.00000000			
1 CEN WASHINGTON	228			
	-2.82521648	-1.43	0.1550	1.97857561
2 CEN WASHINGTON	228			
	0.00000000			
1 CEN WASHINGTON	229			
	-0.46753775	-0.24	0.8143	1.98734017
2 CEN WASHINGTON	229			
	0.00000000			
1 CEN WASHINGTON	230			
	5.32384726	2.69	0.0078	1.97979255
2 CEN WASHINGTON	230			
	0.00000000			
1 CEN WASHINGTON	241			
	-1.17830545	-0.59	0.5532	1.98338428
2 CEN WASHINGTON	241			
	0.00000000			
1 CEN WASHINGTON	242			
	2.35994472	1.18	0.2384	1.99487530
2 CEN WASHINGTON	242			
	0.00000000			
1 MONTANA	231			
	-0.83684298	-0.42	0.6770	2.00577064
2 MONTANA	231			
	0.00000000			
1 MONTANA	232			
	0.80980623	0.41	0.6828	1.97873892
2 MONTANA	232			
	0.00000000			
1 MONTANA	233			
	2.30876347	1.17	0.2450	1.97959928
2 MONTANA	233			
	0.00000000			
1 MONTANA	234			
	-0.60329564	-0.30	0.7612	1.98204935
2 MONTANA	234			
	0.00000000			
1 MONTANA	235			
	0.46740448	0.24	0.8144	1.98802455
2 MONTANA	235			
	0.00000000			
1 MONTANA	236			
	0.35745990	0.18	0.8574	1.98692087
2 MONTANA	236			
	0.00000000			
1 MONTANA	237			

Table 1 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GBA14 4 YR GROSS BASAL ABBA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-1.92166218	-0.96	0.3366	1.99472857
2 MONTANA	237 0.00000000	-	-	-
1 MONTANA	238 0.80275119	0.40	0.6871	1.99003744
2 MONTANA	238 0.00000000	-	-	-
1 N IDAHO	204 0.41890083	0.21	0.8362	2.02330763
2 N IDAHO	204 0.00000000	-	-	-
1 N IDAHO	205 2.66687479	1.33	0.1838	1.99868568
2 N IDAHO	205 0.00000000	-	-	-
1 N IDAHO	206 -4.57559282	-2.26	0.0252	2.02775535
2 N IDAHO	206 0.00000000	-	-	-
1 N IDAHO	208 0.67116904	0.34	0.7358	1.98638556
2 N IDAHO	208 0.00000000	-	-	-
1 N IDAHO	240 3.63847585	1.82	0.0709	2.00292869
2 N IDAHO	240 0.00000000	-	-	-
1 NE OREGON	104 -0.61228347	-0.31	0.7575	1.97990104
2 NE OREGON	104 0.00000000	-	-	-
1 NE OREGON	207 0.94553786	0.48	0.6346	1.98600701
2 NE OREGON	207 0.00000000	-	-	-
1 NE OREGON	212 -3.37234944	-1.70	0.0909	1.98438312
2 NE OREGON	212 0.00000000	-	-	-
1 NE OREGON	213 2.47655162	1.24	0.2148	1.98959398
2 NE OREGON	213 0.00000000	-	-	-
1 NE OREGON	239 1.91765549	0.95	0.3414	2.01025301
2 NE OREGON	239 0.00000000	-	-	-
1 NE OREGON	244 1.14256807	0.56	0.5795	2.05848825
2 NE OREGON	244			

Table 1 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GEAI4

4 YR GROSS BASAL AREA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE	
	0.00000000				
1 NE OREGON	245				
	-2.28161254	-1.14	0.2550	1.99800990	
2 NE OREGON	245				
	0.00000000				
1 NE WASHINGTON	106				
	2.41098589	1.22	0.2255	1.98233428	
2 NE WASHINGTON	106				
	0.00000000				
1 NE WASHINGTON	209				
	-1.02826914	-0.52	0.6041	1.97947678	
2 NE WASHINGTON	209				
	0.00000000				
1 NE WASHINGTON	210				
	-0.37398453	-0.19	0.8505	1.98192382	
2 NE WASHINGTON	210				
	0.00000000				
1 NE WASHINGTON	211				
	-2.53427846	-1.27	0.2042	1.98876838	
2 NE WASHINGTON	211				
	0.00000000				
1 NE WASHINGTON	214				
	2.17044264	1.10	0.2749	1.98203214	
2 NE WASHINGTON	214				
	0.00000000				
1 NE WASHINGTON	215				
	-1.18907765	-0.59	0.5543	2.00728558	
2 NE WASHINGTON	215				
	0.00000000				
1 NE WASHINGTON	216				
	0.32212219	0.16	0.8711	1.98178828	
2 NE WASHINGTON	216				
	0.00000000				
1 NE WASHINGTON	217				
	-1.54993284	-0.78	0.4348	1.98001581	
2 NE WASHINGTON	217				
	0.00000000				
1 NE WASHINGTON	218				
	1.39286823	0.70	0.4824	1.97886065	
2 NE WASHINGTON	218				
	0.00000000				
1 NE WASHINGTON	243				
	2.72178071	1.35	0.1771	2.00892187	
2 NE WASHINGTON	243				
	0.00000000				
TREATMENT	CCNTBOL	-3.87165046	-5.05	0.0001	0.76624098
	200 LB N	-0.60654032	-0.79	0.4303	0.76730601
	400 LB N	0.00000000			
REGION*TREATMENT	CEN IDAHO	CONTROL			
		-0.24203065	-0.22	0.8291	1.11939163

Table 1 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GEAI4 4 YR GROSS BASAL AREA GROWTH (SQ. FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
CEN IDAHO	200 LB N			
	0.06191466	0.06	0.9557	1.11400003
CEN IDAHO	400 LB N			
	0.00000000	.	.	.
CEN WASHINGTON	CONTROL			
	-4.24745109	-3.92	0.0001	1.08430856
CEN WASHINGTON	200 LB N			
	-3.13668588	-2.86	0.0047	1.09547766
CEN WASHINGTON	400 LB N			
	0.00000000	.	.	.
MONTANA	CONTROL			
	2.04579346	1.78	0.0772	1.15130429
MONTANA	200 LB N			
	0.85825653	0.75	0.4564	1.14992442
MONTANA	400 LB N			
	0.00000000	.	.	.
N IDAHO	CONTROL			
	-2.44089591	-1.83	0.0694	1.33650423
N IDAHO	200 LB N			
	0.21456919	0.16	0.8719	1.32882913
N IDAHO	400 LB N			
	0.00000000	.	.	.
NE OREGON	CONTROL			
	1.14027220	0.90	0.3676	1.26232056
NE OREGON	200 LB N			
	0.72214533	0.60	0.5512	1.20938066
NE OREGON	400 LB N			
	0.00000000	.	.	.
NE WASHINGTON	CONTROL			
	0.00000000	.	.	.
NE WASHINGTON	200 LB N			
	0.00000000	.	.	.
NE WASHINGTON	400 LB N			
	0.00000000	.	.	.
BAO	0.18558735	5.10	0.0001	0.03635485
BAO*BAO	-0.00041869	-3.36	0.0010	0.00012475

Table 2

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NBAI4 4 YR NET BASAL AREA GROWTH (SQ.FT/A)

SCURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MCDEL	111	10501.58309570	94.60885672	3.38	0.0001
ERROR	182	5097.06483104	28.00585072		
CORRECTED TOTAL	293	15598.64792673			

R-SQUARE	C.V.	ROOT MSE	NBAI4 MEAN
0.673237	32.7690	5.29205543	16.14957047

SOURCE	DF	TYPE I SS	F VALUE	PR > F
REGION	5	3088.89738144	22.06	0.0001
INSTALLATION (REGION)	43	5350.59142939	4.44	0.0001
BLOCK (REGION*INSTALL)	49	696.50879814	0.51	0.9968
TREATMENT	2	622.63282466	11.12	0.0001
REGION*TREATMENT	10	466.95565344	1.67	0.0914
BAO	1	133.19645843	4.76	0.0305
BAO*BAO	1	142.60055020	5.09	0.0252

SOURCE	DF	TYPE III SS	F VALUE	PR > F
REGION	5	1596.64821907	11.40	0.0001
INSTALLATION (REGION)	43	5533.61473563	4.60	0.0001
BLOCK (REGION*INSTALL)	49	595.59502309	0.43	0.9995
TREATMENT	2	728.26211685	13.00	0.0001
REGION*TREATMENT	10	452.88557214	1.62	0.1046
BAO	1	210.58469281	7.52	0.0067
BAO*BAO	1	142.60055020	5.09	0.0252

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	-7.04030658	-1.01	0.3145	6.98090911
REGION				
CEN IDAHO	9.28793521	2.02	0.0451	4.60236353
CEN WASHINGTON	7.65464799	1.69	0.0931	4.53476251
MONTANA	12.33720977	2.17	0.0316	5.69506060
N IDAHO	19.49266942	4.18	0.0001	4.66625846
NE CREGON	-0.37628147	-0.08	0.9402	5.01062230
NE WASHINGTON	0.00000000	.	.	.

Table 2 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NEAI4

4 YR NET BASAL AREA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INSTALLATION (REGION)				
103 CEN IDAHO	2.11463E73	0.49	0.6270	4.34413301
201 CEN IDAHO	1.08986358	0.25	0.8025	4.35207872
202 CEN IDAHO	5.02476691	1.05	0.2951	4.78572322
203 CEN IDAHO	-1.96101763	-0.45	0.6514	4.33339195
219 CEN IDAHO	0.61014522	0.14	0.8879	4.32339695
220 CEN IDAHO	-4.97841233	-1.15	0.2517	4.32994278
221 CEN IDAHO	-3.17377660	-0.73	0.4636	4.32150355
222 CEN IDAHO	-0.86838380	-0.20	0.8422	4.35625538
223 CEN IDAHO	0.00000000	.	.	.
105 CEN WASHINGTON	3.00278751	0.69	0.4883	4.32430985
224 CEN WASHINGTON	5.86747409	1.35	0.1782	4.34114776
225 CEN WASHINGTON	7.18946137	1.65	0.1000	4.34927341
226 CEN WASHINGTON	4.63959005	1.02	0.3082	4.54067665
227 CEN WASHINGTON	1.83882066	0.41	0.6805	4.45790426
228 CEN WASHINGTON	2.46967219	0.57	0.5691	4.33003163
229 CEN WASHINGTON	4.56612627	1.05	0.2973	4.36824507
230 CEN WASHINGTON	1.11044571	0.26	0.7987	4.34874360
241 CEN WASHINGTON	12.54684794	2.87	0.0046	4.37452840
242 CEN WASHINGTON	0.00000000	.	.	.
231 MONTANA	-7.38083738	-1.56	0.1207	4.73350675
232 MONTANA	-6.48782483	-1.20	0.2303	5.38987864
233 MONTANA	-7.93114193	-1.46	0.1455	5.42539357
234 MONTANA	-7.03514706	-1.31	0.1918	5.37021368
235 MONTANA	-16.94763476	-3.26	0.0013	5.19262325
236 MONTANA				

Table 2 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NBA14

4 YR NET BASAL AREA GROWTH (SQ.FI/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
237 MONTANA	-14.91379757	-2.70	0.0076	5.52818221
238 MONTANA	-11.37219614	-2.13	0.0346	5.34290888
204 N IDAHO	0.00000000	.	.	.
205 N IDAHO	-2.81626934	-0.61	0.5443	4.63633660
206 N IDAHO	-4.69693783	-1.03	0.3021	4.53910228
208 N IDAHO	-3.55637482	-0.82	0.4125	4.32954649
240 N IDAHO	-17.29802795	-3.97	0.0001	4.35186956
240 N IDAHO	0.00000000	.	.	.
104 NE OREGON	12.87484709	2.62	0.0095	4.91497689
207 NE OREGON	-3.25825474	-0.71	0.4776	4.57829714
212 NE OREGON	9.11255589	1.84	0.0681	4.96562356
213 NE OREGON	-9.30837947	-1.91	0.0573	4.86625730
239 NE OREGON	2.38355413	0.55	0.5824	4.32665402
244 NE OREGON	7.25875760	1.17	0.2423	6.18826719
245 NE OREGON	0.00000000	.	.	.
106 NE WASHINGTON	11.03488420	2.45	0.0151	4.49801708
209 NE WASHINGTON	4.78915072	1.11	0.2693	4.32232558
210 NE WASHINGTON	-4.25094388	-0.98	0.3272	4.32664494
211 NE WASHINGTON	8.07685491	1.84	0.0675	4.39114489
214 NE WASHINGTON	14.71809171	3.27	0.0013	4.49451592
215 NE WASHINGTON	18.60731528	4.02	0.0001	4.62452816
216 NE WASHINGTON	-3.65897550	-0.85	0.3989	4.32744805
217 NE WASHINGTON	7.65995409	1.74	0.0829	4.39322422
218 NE WASHINGTON	8.95884625	1.99	0.0483	4.50537703
243 NE WASHINGTON	0.00000000	.	.	.
BLOCK (REGION*INSTALL)	1 CEN IDAHO	103		

Table 2 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NBA14

4 YR NET BASAL AREA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-3.77004118	-0.87	0.3871	4.34887948
2 CEN IDAHO	103 0.00000000	.	.	.
1 CEN IDAHO	201 -1.60615186	-0.35	0.7240	4.54145348
2 CEN IDAHO	201 0.00000000	.	.	.
1 CEN IDAHO	202 -2.97356545	-0.68	0.4992	4.39140767
2 CEN IDAHO	202 0.00000000	.	.	.
1 CEN IDAHO	203 -1.22506114	-0.28	0.7774	4.32682032
2 CEN IDAHO	203 0.00000000	.	.	.
1 CEN IDAHO	219 0.98501510	0.23	0.8201	4.32435518
2 CEN IDAHO	219 0.00000000	.	.	.
1 CEN IDAHO	220 -0.55916030	-0.13	0.8972	4.32237724
2 CEN IDAHO	220 0.00000000	.	.	.
1 CEN IDAHO	221 -1.85817826	-0.43	0.6677	4.32175126
2 CEN IDAHO	221 0.00000000	.	.	.
1 CEN IDAHO	222 1.72777174	0.40	0.6901	4.32681681
2 CEN IDAHO	222 0.00000000	.	.	.
1 CEN IDAHO	223 3.36109261	0.78	0.4389	4.33219936
2 CEN IDAHO	223 0.00000000	.	.	.
1 CEN WASHINGTON	105 -2.15524496	-0.50	0.6197	4.33543364
2 CEN WASHINGTON	105 0.00000000	.	.	.
1 CEN WASHINGTON	224 -1.00072629	-0.23	0.8194	4.37559197
2 CEN WASHINGTON	224 0.00000000	.	.	.
1 CEN WASHINGTON	225 5.76193466	1.31	0.1927	4.40722812
2 CEN WASHINGTON	225 0.00000000	.	.	.
1 CEN WASHINGTON	226 0.81661987	0.19	0.8504	4.32234698
2 CEN WASHINGTON	226	.	.	.

Table 2 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NBA14

4 YR NET BASAL AREA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.00000000	.	.	.
1 CEN WASHINGTON	227 0.62319615	0.14	0.8855	4.32293080
2 CEN WASHINGTON	227 0.00000000	.	.	.
1 CEN WASHINGTON	228 -3.09364393	-0.72	0.4750	4.32134050
2 CEN WASHINGTON	228 0.00000000	.	.	.
1 CEN WASHINGTON	229 -0.07480577	-0.02	0.9863	4.34048290
2 CEN WASHINGTON	229 0.00000000	.	.	.
1 CEN WASHINGTON	230 5.17583355	1.20	0.2329	4.32399840
2 CEN WASHINGTON	230 0.00000000	.	.	.
1 CEN WASHINGTON	241 -4.20568215	-0.97	0.3329	4.33184296
2 CEN WASHINGTON	241 0.00000000	.	.	.
1 CEN WASHINGTON	242 0.32366444	0.07	0.9409	4.35694012
2 CEN WASHINGTON	242 0.00000000	.	.	.
1 MONTANA	231 -0.68906115	-0.16	0.8752	4.38073626
2 MONTANA	231 0.00000000	.	.	.
1 MONTANA	232 2.42271745	0.56	0.5758	4.32169720
2 MONTANA	232 0.00000000	.	.	.
1 MONTANA	233 2.48905969	0.58	0.5655	4.32357628
2 MONTANA	233 0.00000000	.	.	.
1 MONTANA	234 -0.79569647	-0.18	0.8544	4.32892740
2 MONTANA	234 0.00000000	.	.	.
1 MONTANA	235 4.74373713	1.09	0.2760	4.34197763
2 MONTANA	235 0.00000000	.	.	.
1 MONTANA	236 -0.17681366	-0.04	0.9675	4.33956712
2 MONTANA	236 0.00000000	.	.	.
1 MONTANA	237	.	.	.

Table 2 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NBAI4

4 YR NET BASAL AREA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-3.05012549	-0.70	0.4848	4.35661965
2 MONTANA	237 0.00000000	.	.	.
1 MONTANA	238 0.67129719	0.15	0.8774	4.34637390
2 MONTANA	238 0.00000000	.	.	.
1 N IDAHO	204 -2.88841448	-0.65	0.5142	4.41903820
2 N IDAHO	204 0.00000000	.	.	.
1 N IDAHO	205 5.24013352	1.20	0.2315	4.36526224
2 N IDAHO	205 0.00000000	.	.	.
1 N IDAHO	206 -5.30116891	-1.20	0.2329	4.42875232
2 N IDAHO	206 0.00000000	.	.	.
1 N IDAHO	208 2.44296448	0.56	0.5741	4.33839796
2 N IDAHO	208 0.00000000	.	.	.
1 N IDAHO	240 0.88445485	0.20	0.8400	4.37452926
2 N IDAHO	240 0.00000000	.	.	.
1 NE OREGON	104 -0.61886741	-0.14	0.8864	4.32423535
2 NE OREGON	104 0.00000000	.	.	.
1 NE OREGON	207 -0.65687934	-0.15	0.8798	4.33757119
2 NE OREGON	207 0.00000000	.	.	.
1 NE OREGON	212 -3.36050809	-0.78	0.4391	4.33402450
2 NE OREGON	212 0.00000000	.	.	.
1 NE OREGON	213 7.71368392	1.78	0.0775	4.34540537
2 NE OREGON	213 0.00000000	.	.	.
1 NE OREGON	239 -5.05666624	-1.15	0.2509	4.39052605
2 NE OREGON	239 0.00000000	.	.	.
1 NE OREGON	244 -0.07342049	-0.02	0.9870	4.49587501
2 NE OREGON	244			

Table 2 (continued)

FOUR-YEAR GROWTH MODELS—1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NEAI4

4 YR NET BASAL AREA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.0000000	.	.	.
1 NE OREGON	245 1.64479394	0.38	0.7067	4.36378629
2 NE OREGON	245 0.0000000	.	.	.
1 NE WASHINGTON	106 1.10666613	0.26	0.7985	4.32954969
2 NE WASHINGTON	106 0.0000000	.	.	.
1 NE WASHINGTON	209 -3.11390175	-0.72	0.4723	4.32330872
2 NE WASHINGTON	209 0.0000000	.	.	.
1 NE WASHINGTON	210 -0.28150472	-0.07	0.9482	4.32865322
2 NE WASHINGTON	210 0.0000000	.	.	.
1 NE WASHINGTON	211 2.07225533	0.48	0.6339	4.34360219
2 NE WASHINGTON	211 0.0000000	.	.	.
1 NE WASHINGTON	214 2.21995731	0.51	0.6087	4.32888981
2 NE WASHINGTON	214 0.0000000	.	.	.
1 NE WASHINGTON	215 -1.14479862	-0.26	0.7943	4.38404500
2 NE WASHINGTON	215 0.0000000	.	.	.
1 NE WASHINGTON	216 -1.91427663	-0.44	0.6588	4.32835719
2 NE WASHINGTON	216 0.0000000	.	.	.
1 NE WASHINGTON	217 -1.23888228	-0.29	0.7748	4.32448601
2 NE WASHINGTON	217 0.0000000	.	.	.
1 NE WASHINGTON	218 1.37435719	0.32	0.7509	4.32196307
2 NE WASHINGTON	218 0.0000000	.	.	.
1 NE WASHINGTON	243 3.66167401	0.83	0.4051	4.38761876
2 NE WASHINGTON	243 0.0000000	.	.	.
TREATMENT	CONTROL	-0.11916732	0.9433	1.67352119
	200 LB N	2.31863763	0.1682	1.67584727
	400 LB N	0.0000000	.	.
REGION*TREATMENT	CEN IDAHO	CONTROL	-1.61	0.1093
		-3.93437481	0.1093	2.44482565

Table 2 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NBAI4

4 YR NET BASAL AREA GROWTH (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
CEN IDAHO	200 LB N			
	-2.68354630	-1.10	0.2715	2.43305003
CEN IDAHO	400 LB N			
	0.00000000	.	.	.
CEN WASHINGTON	CONTROL			
	-7.31814714	-3.09	0.0023	2.36820189
CEN WASHINGTON	200 LB N			
	-5.86600809	-2.45	0.0152	2.39259595
CEN WASHINGTON	400 LB N			
	0.00000000	.	.	.
MONTANA	CONTROL			
	-0.61788379	-0.25	0.8062	2.51452503
MONTANA	200 LB N			
	-1.18385879	-0.47	0.6379	2.51151129
MONTANA	400 LB N			
	0.00000000	.	.	.
N IDAHO	CONTROL			
	-6.75906150	-2.32	0.0217	2.91901398
N IDAHO	200 LB N			
	-2.53758951	-0.87	0.3831	2.90225106
N IDAHO	400 LB N			
	0.00000000	.	.	.
NE OREGON	CONTROL			
	-2.14477018	-0.78	0.4376	2.75699192
NE OREGON	200 LB N			
	-1.81189333	-0.69	0.4936	2.64136767
NE OREGON	400 LB N			
	0.00000000	.	.	.
NE WASHINGTON	CONTROL			
	0.00000000	.	.	.
NE WASHINGTON	200 LB N			
	0.00000000	.	.	.
NE WASHINGTON	400 LB N			
	0.00000000	.	.	.
BAO	0.21772949	2.74	0.0067	0.07940141
BAO*BAO	-0.00061481	-2.26	0.0252	0.00027246

Table 3

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HTINC4 4 YR MEAN HEIGHT INC (FT/TREE)

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	111	567.86953079	5.11594172	16.41	0.0001
ERROR	182	56.74696202	0.31179649		
CORRECTED TOTAL	293	624.61649280			

R-SQUARE	C.V.	ROOT MSE	HTINC4 MEAN
0.909149	12.8596	0.55838741	4.34217687

SOURCE	DF	TYPE I SS	F VALUE	PR > F
REGION	5	202.50225141	129.89	0.0001
INSTALLATION (REGION)	43	303.14551439	22.61	0.0001
BLOCK (REGION*INSTALL)	49	28.04313767	1.84	0.0022
TREATMENT	2	25.75503695	41.30	0.0001
REGION*TREATMENT	10	7.92398431	2.54	0.0068
BAO	1	0.49880116	1.60	0.2076
BAO*BAO	1	0.00080490	0.00	0.9595

SOURCE	DF	TYPE III SS	F VALUE	PR > F
REGION	5	185.12359984	118.75	0.0001
INSTALLATION (REGION)	43	262.78049271	19.60	0.0001
BLOCK (REGION*INSTALL)	49	28.11004761	1.84	0.0021
TREATMENT	2	21.84233987	35.03	0.0001
REGION*TREATMENT	10	7.96860804	2.56	0.0065
BAO	1	0.04382607	0.14	0.7082
BAO*BAO	1	0.00080490	0.00	0.9595

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	4.80017141	6.52	0.0001	0.73658558
REGION				
CEN IDAHO	-1.00274432	-2.06	0.0404	0.48561506
CEN WASHINGTON	-1.47716879	-3.09	0.0023	0.47848219
MONTANA	-0.62918285	-1.05	0.2965	0.60091020
N IDAHO	2.91877905	5.93	0.0001	0.49235689
NE OREGON	-0.67584603	-1.28	0.2028	0.52869219
NE WASHINGTON	0.00000000	.	.	.

Table 3 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HTINC4

4 YR MEAN HEIGHT INC (FT/TREE)

PARAMETER	ESTIMATE	T FOR H ₀ : PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INSTALLATION (REGION)				
103 CEN IDAHO	0.36317595	0.79	0.4292	0.45836806
201 CEN IDAHO	0.83941592	1.83	0.0692	0.45920644
202 CEN IDAHO	0.21465677	0.43	0.6713	0.50496213
203 CEN IDAHO	0.50562395	1.11	0.2703	0.45723472
219 CEN IDAHO	0.45975927	1.01	0.3149	0.45618011
220 CEN IDAHO	-1.32349707	-2.90	0.0042	0.45687078
221 CEN IDAHO	-0.37639206	-0.83	0.4102	0.45598032
222 CEN IDAHO	-0.46060011	-1.00	0.3176	0.45964714
223 CEN IDAHO	0.00000000	-	-	-
105 CEN WASHINGTON	0.62376353	1.37	0.1733	0.45627643
224 CEN WASHINGTON	1.29504059	2.83	0.0052	0.45805307
225 CEN WASHINGTON	2.81186243	6.13	0.0001	0.45891044
226 CEN WASHINGTON	2.74807227	5.74	0.0001	0.47910622
227 CEN WASHINGTON	2.68947936	5.72	0.0001	0.47037255
228 CEN WASHINGTON	2.90080208	6.35	0.0001	0.45688016
229 CEN WASHINGTON	2.82972577	6.14	0.0001	0.46091222
230 CEN WASHINGTON	1.90940139	4.16	0.0001	0.45885454
241 CEN WASHINGTON	2.24917068	4.87	0.0001	0.46157520
242 CEN WASHINGTON	0.00000000	-	-	-
231 MONTANA	-0.43613208	-0.87	0.3837	0.49945254
232 MONTANA	0.98163671	1.73	0.0860	0.56870915
233 MONTANA	0.62574353	1.09	0.2758	0.57245648
234 MONTANA	1.78910943	3.16	0.0019	0.56663422
235 MONTANA	-1.17682642	-2.15	0.0330	0.54789589
236 MONTANA				

Table 3 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HTINC4

4 YR MEAN HEIGHT INC (FT/TREE)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-1.58756542	-2.72	0.0071	0.58330215
237 MONTANA	-1.75787641	-3.12	0.0021	0.56375317
238 MONTANA	0.00000000	.	.	.
204 N IDAHO	-0.20402465	-0.42	0.6771	0.48919971
205 N IDAHO	-0.47013630	-0.98	0.3276	0.47894010
206 N IDAHO	-0.73467784	-1.61	0.1095	0.45682897
208 N IDAHO	-4.68206863	-10.20	0.0001	0.45918437
240 N IDAHO	0.00000000	.	.	.
104 NE OREGON	1.70447577	3.29	0.0012	0.51860024
207 NE OREGON	1.32402932	2.74	0.0067	0.48307571
212 NE OREGON	1.10898993	2.12	0.0357	0.52394418
213 NE OREGON	-0.60309261	-1.17	0.2417	0.51345962
239 NE OREGON	0.08667006	0.19	0.8496	0.45652377
244 NE OREGON	-0.09542271	-0.15	0.8840	0.65295054
245 NE OREGON	0.00000000	.	.	.
106 NE WASHINGTON	1.17289026	2.47	0.0144	0.47460502
209 NE WASHINGTON	1.05863150	2.32	0.0214	0.45606706
210 NE WASHINGTON	0.70785151	1.55	0.1228	0.45652281
211 NE WASHINGTON	1.62117290	3.50	0.0006	0.46332848
214 NE WASHINGTON	2.10232343	4.43	0.0001	0.47423560
215 NE WASHINGTON	2.19637574	4.50	0.0001	0.48795375
216 NE WASHINGTON	0.72392168	1.59	0.1146	0.45660755
217 NE WASHINGTON	0.65743653	1.42	0.1578	0.46354788
218 NE WASHINGTON	-0.73093991	-1.54	0.1259	0.47538160
243 NE WASHINGTON	0.00000000	.	.	.
BLOCK (REGION*INSTALL)	1 CEN IDAHO	103		

Table 3 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HTINC4

4 YR MEAN HEIGHT INC (FT/TREE)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
2 CEN IDAHO	-1.22181329	-2.66	0.0084	0.45886888
	103	.	.	.
	0.00000000	.	.	.
1 CEN IDAHO	201	.	.	.
	-0.37702508	-0.79	0.4324	0.47918818
2 CEN IDAHO	201	.	.	.
	0.00000000	.	.	.
1 CEN IDAHO	202	.	.	.
	-0.41874658	-0.90	0.3673	0.46335621
2 CEN IDAHO	202	.	.	.
	0.00000000	.	.	.
1 CEN IDAHO	203	.	.	.
	-0.82494683	-1.81	0.0724	0.45654132
2 CEN IDAHO	203	.	.	.
	0.00000000	.	.	.
1 CEN IDAHO	219	.	.	.
	0.17710423	0.39	0.6984	0.45628121
2 CEN IDAHO	219	.	.	.
	0.00000000	.	.	.
1 CEN IDAHO	220	.	.	.
	-0.74784429	-1.64	0.1028	0.45607251
2 CEN IDAHO	220	.	.	.
	0.00000000	.	.	.
1 CEN IDAHO	221	.	.	.
	0.00885008	0.02	0.9845	0.45600646
2 CEN IDAHO	221	.	.	.
	0.00000000	.	.	.
1 CEN IDAHO	222	.	.	.
	0.31011303	0.68	0.4978	0.45654095
2 CEN IDAHO	222	.	.	.
	0.00000000	.	.	.
1 CEN IDAHO	223	.	.	.
	1.22941180	2.69	0.0078	0.45710889
2 CEN IDAHO	223	.	.	.
	0.00000000	.	.	.
1 CEN WASHINGTON	105	.	.	.
	0.45774965	1.00	0.3183	0.45745015
2 CEN WASHINGTON	105	.	.	.
	0.00000000	.	.	.
1 CEN WASHINGTON	224	.	.	.
	-0.23882985	-0.52	0.6056	0.46168743
2 CEN WASHINGTON	224	.	.	.
	0.00000000	.	.	.
1 CEN WASHINGTON	225	.	.	.
	0.52523305	1.13	0.2602	0.46502549
2 CEN WASHINGTON	225	.	.	.
	0.00000000	.	.	.
1 CEN WASHINGTON	226	.	.	.
	-0.22182790	-0.49	0.6273	0.45606932
2 CEN WASHINGTON	226	.	.	.

Table 3 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HTINC4

4 YR MEAN HEIGHT INC (FT/TREE)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.00000000	.	.	.
1 CEN WASHINGTON	227 0.68881195	1.51	0.1327	0.45613092
2 CEN WASHINGTON	227 0.00000000	.	.	.
1 CEN WASHINGTON	228 -0.24293086	-0.53	0.5948	0.45596312
2 CEN WASHINGTON	228 0.00000000	.	.	.
1 CEN WASHINGTON	229 -0.26083647	-0.57	0.5697	0.45798292
2 CEN WASHINGTON	229 0.00000000	.	.	.
1 CEN WASHINGTON	230 1.31246328	2.88	0.0045	0.45624357
2 CEN WASHINGTON	230 0.00000000	.	.	.
1 CEN WASHINGTON	241 -0.11846717	-0.26	0.7958	0.45707128
2 CEN WASHINGTON	241 0.00000000	.	.	.
1 CEN WASHINGTON	242 -0.29484801	-0.64	0.5221	0.45971939
2 CEN WASHINGTON	242 0.00000000	.	.	.
1 MONTANA	231 -0.27518458	-0.60	0.5524	0.46223022
2 MONTANA	231 0.00000000	.	.	.
1 MONTANA	232 0.30643781	0.67	0.5024	0.45600076
2 MONTANA	232 0.00000000	.	.	.
1 MONTANA	233 0.19092578	0.42	0.6761	0.45619903
2 MONTANA	233 0.00000000	.	.	.
1 MONTANA	234 -0.71853926	-1.57	0.1174	0.45676365
2 MONTANA	234 0.00000000	.	.	.
1 MONTANA	235 0.21205032	0.46	0.6440	0.45814063
2 MONTANA	235 0.00000000	.	.	.
1 MONTANA	236 0.50528095	1.10	0.2713	0.45788629
2 MONTANA	236 0.00000000	.	.	.
1 MONTANA	237	.	.	.

Table 3 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HTINC4 4 YR MEAN HEIGHT INC (FT/TREE)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.54906314	1.19	0.2339	0.45968557
2 MONTANA	237 0.00000000	.	.	.
1 MONTANA	238 0.83725493	1.83	0.0695	0.45860450
2 MONTANA	238 0.00000000	.	.	.
1 N IDAHO	204 -0.73512022	-1.58	0.1166	0.46627162
2 N IDAHO	204 0.00000000	.	.	.
1 N IDAHO	205 1.19032877	2.58	0.0105	0.46059749
2 N IDAHO	205 0.00000000	.	.	.
1 N IDAHO	206 0.09176531	0.20	0.8445	0.46729660
2 N IDAHO	206 0.00000000	.	.	.
1 N IDAHO	208 0.67856761	1.48	0.1400	0.45776293
2 N IDAHO	208 0.00000000	.	.	.
1 N IDAHO	240 -0.81199413	-1.76	0.0802	0.46157529
2 N IDAHO	240 0.00000000	.	.	.
1 NE OREGON	104 -0.53006656	-1.16	0.2469	0.45626857
2 NE OREGON	104 0.00000000	.	.	.
1 NE OREGON	207 1.30527204	2.85	0.0048	0.45767569
2 NE OREGON	207 0.00000000	.	.	.
1 NE OREGON	212 -0.47470529	-1.04	0.3006	0.45730146
2 NE OREGON	212 0.00000000	.	.	.
1 NE OREGON	213 0.21078044	0.46	0.6463	0.45850231
2 NE OREGON	213 0.00000000	.	.	.
1 NE OREGON	239 0.52117920	1.13	0.2621	0.46326318
2 NE OREGON	239 0.00000000	.	.	.
1 NE OREGON	244 0.45700206	0.96	0.3366	0.47437900
2 NE OREGON	244	.	.	.

Table 3 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HTINC4

4 YR MEAN HEIGHT INC (FT/TREE)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.0000000	-	-	-
1 NE OREGON	245 0.73344099	1.59	0.1129	0.46044176
2 NE OREGON	245 0.0000000	-	-	-
1 NE WASHINGTON	106 0.42864850	0.94	0.3493	0.45682931
2 NE WASHINGTON	106 0.0000000	-	-	-
1 NE WASHINGTON	209 -0.22213462	-0.49	0.6269	0.45617080
2 NE WASHINGTON	209 0.0000000	-	-	-
1 NE WASHINGTON	210 -0.32072119	-0.70	0.4834	0.45673472
2 NE WASHINGTON	210 0.0000000	-	-	-
1 NE WASHINGTON	211 -0.67731026	-1.48	0.1412	0.45831205
2 NE WASHINGTON	211 0.0000000	-	-	-
1 NE WASHINGTON	214 -0.26574256	-0.58	0.5614	0.45675968
2 NE WASHINGTON	214 0.0000000	-	-	-
1 NE WASHINGTON	215 -0.33218532	-0.72	0.4736	0.46257934
2 NE WASHINGTON	215 0.0000000	-	-	-
1 NE WASHINGTON	216 1.27152331	2.78	0.0059	0.45670348
2 NE WASHINGTON	216 0.0000000	-	-	-
1 NE WASHINGTON	217 0.08169687	0.18	0.8581	0.45629502
2 NE WASHINGTON	217 0.0000000	-	-	-
1 NE WASHINGTON	218 0.25989434	0.57	0.5694	0.45602881
2 NE WASHINGTON	218 0.0000000	-	-	-
1 NE WASHINGTON	243 0.28374391	0.61	0.5407	0.46295642
2 NE WASHINGTON	243 0.0000000	-	-	-
TREATMENT	CCNTROL	-2.92	0.0039	0.17658038
	200 LB N	-0.86	0.3913	0.17682581
	400 LB N	-	-	-
REGION*TREATMENT	CEN IDAHO CONTROL	1.04	0.3003	0.25796401
		0.26796428		

Table 3 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HTINC4 4 YR MEAN HEIGHT INC (FT/TREE)

PARAMETER	ESTIMATE	T FOR H ₀ : PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
CEN IDAHO	200 LB N 0.45838984	1.79	0.0758	0.25672152
CEN IDAHO	400 LB N 0.00000000	.	.	.
CEN WASHINGTON	CONTROL -0.83506305	-3.34	0.0010	0.24987911
CEN WASHINGTON	200 LB N -0.26262002	-1.04	0.2996	0.25245303
CEN WASHINGTON	400 LB N 0.00000000	.	.	.
MONTANA	CONTROL -0.07201459	-0.27	0.7864	0.26531829
MONTANA	200 LB N 0.07927934	0.30	0.7652	0.26500030
MONTANA	400 LB N 0.00000000	.	.	.
N IDAHO	CONTROL -0.17593241	-0.57	0.5686	0.30799765
N IDAHO	200 LB N 0.13101555	0.43	0.6693	0.30622892
N IDAHO	400 LB N 0.00000000	.	.	.
NE OREGON	CONTROL -0.11498787	-0.40	0.6931	0.29090201
NE OREGON	200 LB N -0.22645685	-0.81	0.4175	0.27870200
NE OREGON	400 LB N 0.00000000	.	.	.
NE WASHINGTON	CONTROL 0.00000000	.	.	.
NE WASHINGTON	200 LB N 0.00000000	.	.	.
NE WASHINGTON	400 LB N 0.00000000	.	.	.
BAO	-0.00314102	-0.37	0.7082	0.00837798
BAO*BAO	1.4606768E-06	0.05	0.9595	0.00002875

Table 4

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GVI4 4 YR GROSS VOLUME GROWTH (CU.FT/A)

SCURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	111	14946723.92824254	134655.17052471	18.31	0.0001
ERROR	182	1338138.82331300	7352.41111710		
CORRECTED TOTAL	293	16284862.75155553			

R-SQUARE	C.V.	ROOT MSE	GVI4 MEAN
0.917829	13.1127	85.74620176	653.91729169

SOURCE	DF	TYPE I SS	F VALUE	PR > F
REGION	5	5294853.29520878	144.03	0.0001
INSTALLATION (REGION)	43	5994371.66388900	18.96	0.0001
BLOCK (REGION*INSTALL)	49	1053009.05461648	2.92	0.0001
TREATMENT	2	1149447.73732893	78.17	0.0001
REGION*TREATMENT	10	443536.26462635	6.03	0.0001
BAO	1	954438.30568187	129.81	0.0001
BAO*BAO	1	57067.60689112	7.76	0.0059

SOURCE	DF	TYPE III SS	F VALUE	PR > F
REGION	5	3304413.60930828	89.89	0.0001
INSTALLATION (REGION)	43	4813798.71932607	15.23	0.0001
BLCK (REGION*INSTALL)	49	570218.68865999	1.58	0.0161
TREATMENT	2	1083137.84989862	73.66	0.0001
REGION*TREATMENT	10	332293.79750705	4.52	0.0001
BAO	1	232797.68021335	31.66	0.0001
BAO*BAO	1	57067.60689112	7.76	0.0059

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	-73.85671031	-0.65	0.5146	113.11038761
REGION				
CEN IDAHO	25.76512533	0.35	0.7301	74.57125053
CEN WASHINGTON	-110.21552226	-1.50	0.1353	73.47592360
MONTANA	56.75846543	0.62	0.5393	92.27602041
N IDAHO	541.39764626	7.16	0.0001	75.60652836
NE CREGON	-258.20315566	-3.18	0.0017	81.18619236
NE WASHINGTON	0.00000000	.	.	.

Table 4 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GVI4

4 YR GROSS VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INSTALLATION (REGION)				
103 CEN IDAHO	42.97559909	0.61	0.5423	70.38718891
201 CEN IDAHO	38.47376416	0.55	0.5860	70.51593172
202 CEN IDAHO	105.68153977	1.36	0.1746	77.54219401
203 CEN IDAHO	1.19085520	0.02	0.9865	70.21315342
219 CEN IDAHO	-20.36612664	-0.29	0.7716	70.05120631
220 CEN IDAHO	-159.98876536	-2.28	0.0237	70.15726730
221 CEN IDAHO	-112.69844002	-1.61	0.1092	70.02052790
222 CEN IDAHO	-101.63971421	-1.44	0.1516	70.58360542
223 CEN IDAHO	0.00000000	.	.	.
105 CEN WASHINGTON	196.36594107	2.80	0.0056	70.06599797
224 CEN WASHINGTON	455.71124063	6.48	0.0001	70.33881946
225 CEN WASHINGTON	398.04994569	5.65	0.0001	70.47047785
226 CEN WASHINGTON	295.94931553	4.02	0.0001	73.57174945
227 CEN WASHINGTON	286.44408204	3.97	0.0001	72.23060358
228 CEN WASHINGTON	335.08193330	4.78	0.0001	70.15870682
229 CEN WASHINGTON	427.86113460	6.05	0.0001	70.77787222
230 CEN WASHINGTON	320.01083359	4.54	0.0001	70.46189353
241 CEN WASHINGTON	464.12028079	6.55	0.0001	70.87967988
242 CEN WASHINGTON	0.00000000	.	.	.
231 MONTANA	-118.71600293	-1.55	0.1234	76.69614001
232 MONTANA	-6.61659104	-0.08	0.9397	87.33121317
233 MONTANA	-98.56105569	-1.12	0.2637	87.90665503
234 MONTANA	25.34523983	0.29	0.7712	87.01258542
235 MONTANA	-281.43112865	-3.34	0.0010	84.13512037
236 MONTANA				

Table 4 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GVI4

4 YR GBCSS VOLUME GROWTH (CU. FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-455.55868062	-5.09	0.0001	89.57212053
237 MONTANA	-336.44017615	-3.89	0.0001	86.57017075
238 MCNTANA	0.00000000	.	.	.
204 N IDAHO	-82.01863979	-1.09	0.2764	75.12170998
205 N IDAHO	-158.68546129	-2.16	0.0323	73.54624018
206 N IDAHO	-97.49321437	-1.39	0.1663	70.15084621
208 N IDAHO	-732.37066018	-10.39	0.0001	70.51254286
240 N IDAHO	0.00000000	.	.	.
104 NE OREGON	388.63685511	4.88	0.0001	79.63646743
207 NE OREGON	264.01522409	3.56	0.0005	74.18130728
212 NE OREGON	325.35807986	4.04	0.0001	80.45708604
213 NE OREGON	143.18037919	1.82	0.0710	78.84707287
239 NE OREGON	174.34094132	2.49	0.0138	70.10398008
244 NE OREGON	2.51986099	0.03	0.9800	100.26735609
245 NE OREGON	0.00000000	.	.	.
106 NE WASHINGTON	232.62158033	3.19	0.0017	72.88054417
209 NE WASHINGTON	109.95155032	1.57	0.1182	70.03384708
210 NE WASHINGTON	-6.02820352	-0.09	0.9316	70.10383293
211 NE WASHINGTON	378.47162593	5.32	0.0001	71.14891378
214 NE WASHINGTON	304.01302458	4.17	0.0001	72.82381564
215 NE WASHINGTON	359.41272375	4.80	0.0001	74.93038003
216 NE WASHINGTON	11.35528591	0.16	0.8715	70.11684555
217 NE WASHINGTON	89.43179375	1.26	0.2106	71.18260472
218 NE WASHINGTON	91.49121549	1.25	0.2117	72.99979609
243 NE WASHINGTON	0.00000000	.	.	.
BLOCK (REGION*INSTALL) 1 CEN IDAHO	103	.	.	.

Table 4 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GVI4

4 YR GROSS VOLUME GROWTH (CU.FI/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-84.58233547	-1.20	0.2316	70.46409509
2 CEN IDAHO	103 0.00000000	.	.	.
1 CEN IDAHO	201 -72.97134618	-0.99	0.3227	73.58433617
2 CEN IDAHO	201 0.00000000	.	.	.
1 CEN IDAHO	202 -93.68620836	-1.32	0.1896	71.15317151
2 CEN IDAHO	202 0.00000000	.	.	.
1 CEN IDAHO	203 -59.68889231	-0.85	0.3957	70.10667455
2 CEN IDAHO	203 0.00000000	.	.	.
1 CEN IDAHO	219 79.33844192	1.13	0.2590	70.06673234
2 CEN IDAHO	219 0.00000000	.	.	.
1 CEN IDAHO	220 -31.10824802	-0.44	0.6574	70.03468415
2 CEN IDAHO	220 0.00000000	.	.	.
1 CEN IDAHO	221 -11.91194479	-0.17	0.8651	70.02454148
2 CEN IDAHO	221 0.00000000	.	.	.
1 CEN IDAHO	222 40.43892407	0.58	0.5648	70.10661768
2 CEN IDAHO	222 0.00000000	.	.	.
1 CEN IDAHO	223 157.89306201	2.25	0.0257	70.19383016
2 CEN IDAHO	223 0.00000000	.	.	.
1 CEN WASHINGTON	105 153.22575950	2.18	0.0304	70.24623463
2 CEN WASHINGTON	105 0.00000000	.	.	.
1 CEN WASHINGTON	224 35.16926306	0.50	0.6204	70.89691264
2 CEN WASHINGTON	224 0.00000000	.	.	.
1 CEN WASHINGTON	225 166.01868548	2.32	0.0212	71.40950743
2 CEN WASHINGTON	225 0.00000000	.	.	.
1 CEN WASHINGTON	226 25.90356943	0.37	0.7119	70.03419388
2 CEN WASHINGTON	226			

Table 4 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GVI4

4 YR GROSS VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.00000000	.	.	.
1 CEN WASHINGTON	227	.	.	.
2 CEN WASHINGTON	41.71604919	0.60	0.5522	70.04365345
	0.00000000	.	.	.
1 CEN WASHINGTON	228	.	.	.
2 CEN WASHINGTON	-64.51152603	-0.92	0.3581	70.01788605
	0.00000000	.	.	.
1 CEN WASHINGTON	229	.	.	.
2 CEN WASHINGTON	-33.59195157	-0.48	0.6335	70.32804686
	0.00000000	.	.	.
1 CEN WASHINGTON	230	.	.	.
2 CEN WASHINGTON	179.24268494	2.56	0.0113	70.06095147
	0.00000000	.	.	.
1 CEN WASHINGTON	241	.	.	.
2 CEN WASHINGTON	-54.13884834	-0.77	0.4415	70.18805547
	0.00000000	.	.	.
1 CEN WASHINGTON	242	.	.	.
2 CEN WASHINGTON	90.98125877	1.29	0.1991	70.59470011
	0.00000000	.	.	.
1 MONTANA	231	.	.	.
2 MONTANA	-64.27515585	-0.91	0.3664	70.98026457
	0.00000000	.	.	.
1 MONTANA	232	.	.	.
2 MONTANA	47.20651974	0.67	0.5011	70.02366553
	0.00000000	.	.	.
1 MONTANA	233	.	.	.
2 MONTANA	67.10109514	0.96	0.3394	70.05411203
	0.00000000	.	.	.
1 MONTANA	234	.	.	.
2 MONTANA	-42.75900468	-0.61	0.5429	70.14081513
	0.00000000	.	.	.
1 MONTANA	235	.	.	.
2 MONTANA	44.64198600	0.63	0.5265	70.35226570
	0.00000000	.	.	.
1 MONTANA	236	.	.	.
2 MONTANA	37.73368150	0.54	0.5922	70.31320861
	0.00000000	.	.	.
1 MONTANA	237	.	.	.

Table 4 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GVI4

4 YR GROSS VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-0.45916914	-0.01	0.9948	70.58950766
2 MONTANA	237 0.00000000	-	-	-
1 MONTANA	238 44.51144972	0.63	0.5281	70.42349765
2 MONTANA	238 0.00000000	-	-	-
1 N IDAHO	204 -23.72737572	-0.33	0.7407	71.60086397
2 N IDAHO	204 0.00000000	-	-	-
1 N IDAHO	205 219.60869806	3.10	0.0022	70.72954194
2 N IDAHO	205 0.00000000	-	-	-
1 N IDAHO	206 -179.97413106	-2.51	0.0130	71.75826001
2 N IDAHO	206 0.00000000	-	-	-
1 N IDAHO	208 119.69363768	1.70	0.0903	70.29426501
2 N IDAHO	208 0.00000000	-	-	-
1 N IDAHO	240 -118.48940637	-1.67	0.0963	70.87969384
2 N IDAHO	240 0.00000000	-	-	-
1 NE OREGON	104 -26.05309527	-0.37	0.7104	70.06479073
2 NE OREGON	104 0.00000000	-	-	-
1 NE OREGON	207 112.26810321	1.60	0.1119	70.28086893
2 NE OREGON	207 0.00000000	-	-	-
1 NE OREGON	212 -84.24883000	-1.20	0.2318	70.22340257
2 NE OREGON	212 0.00000000	-	-	-
1 NE OREGON	213 110.25997809	1.57	0.1191	70.40780476
2 NE OREGON	213 0.00000000	-	-	-
1 NE OREGON	239 115.24202369	1.62	0.1070	71.13888687
2 NE OREGON	239 0.00000000	-	-	-
1 NE OREGON	244 111.17934571	1.53	0.1287	72.84583673
2 NE OREGON	244 0.00000000	-	-	-

Table 4 (continued)

FOUR-YEAR GROWTH MODELS—1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GVI4

4 YR GROSS VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE	
	0.0000000	.	.	.	
1 NE OREGON	245 8.68043933	0.12	0.9024	70.70562735	
2 NE OREGON	245 0.0000000	.	.	.	
1 NE WASHINGTON	106 86.35723707	1.23	0.2199	70.15089800	
2 NE WASHINGTON	106 0.0000000	.	.	.	
1 NE WASHINGTON	209 -33.48214513	-0.48	0.6332	70.04977671	
2 NE WASHINGTON	209 0.0000000	.	.	.	
1 NE WASHINGTON	210 -58.11572843	-0.83	0.4084	70.13637269	
2 NE WASHINGTON	210 0.0000000	.	.	.	
1 NE WASHINGTON	211 -103.90866368	-1.48	0.1416	70.37858817	
2 NE WASHINGTON	211 0.0000000	.	.	.	
1 NE WASHINGTON	214 27.33785119	0.39	0.6972	70.14020611	
2 NE WASHINGTON	214 0.0000000	.	.	.	
1 NE WASHINGTON	215 -38.95510240	-0.55	0.5841	71.03387554	
2 NE WASHINGTON	215 0.0000000	.	.	.	
1 NE WASHINGTON	216 72.67386006	1.04	0.3015	70.13157614	
2 NE WASHINGTON	216 0.0000000	.	.	.	
1 NE WASHINGTON	217 -2.22512169	-0.03	0.9747	70.06885217	
2 NE WASHINGTON	217 0.0000000	.	.	.	
1 NE WASHINGTON	218 18.63635188	0.27	0.7904	70.02797338	
2 NE WASHINGTON	218 0.0000000	.	.	.	
1 NE WASHINGTON	243 41.80880378	0.59	0.5572	71.09178059	
2 NE WASHINGTON	243 0.0000000	.	.	.	
TREATMENT	CONTROL	-119.98392241	-4.42	0.0001	27.11575628
	200 LB N	-12.06142741	-0.44	0.6574	27.15344530
	400 LB N	0.00000000	.	.	.
REGION*TREATMENT	CEK IDAHO	CONTROL	0.05	0.9564	39.61306069
		2.16668810			

Table 4 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GVI4

4 YR GROSS VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
CEN IDAHO	200 LB N 7.85375032	0.20	0.8423	39.42226255
CEN IDAHO	400 LB N 0.00000000	.	.	.
CEN WASHINGTON	CONTROL -161.54488582	-4.21	0.0001	38.37154004
CEN WASHINGTON	200 LB N -107.54014099	-2.77	0.0061	38.76679251
CEN WASHINGTON	400 LB N 0.00000000	.	.	.
MONTANA	CONTROL 53.14262730	1.30	0.1938	40.74238696
MCNTANA	200 LB N 22.27594634	0.55	0.5848	40.69355595
MCNTANA	400 LB N 0.00000000	.	.	.
N IDAHO	CONTROL -99.94247191	-2.11	0.0360	47.29624719
N IDAHO	200 LB N 6.58740777	0.14	0.8887	47.02464059
N IDAHO	400 LB N 0.00000000	.	.	.
NE OREGON	CONTROL 38.67381844	0.87	0.3878	44.67103354
NE OREGON	200 LB N 3.82012772	0.09	0.9290	42.79759505
NE OREGON	400 LB N 0.00000000	.	.	.
NE WASHINGTON	CONTROL 0.00000000	.	.	.
NE WASHINGTON	200 LB N 0.00000000	.	.	.
NE WASHINGTON	400 LB N 0.00000000	.	.	.
BAO	7.23924328	5.63	0.0001	1.28652651
BAO*BAO	-0.01229924	-2.79	0.0059	0.00441467

Table 5

FOUR-YEAR GROWTH MODELS—1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVI4		4 YR NET VOLUME GROWTH (CU.FT/A)			
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	111	14754661.30262576	132924.87660023	4.96	0.0001
ERROR	182	4876838.32191770	26795.81495559		
CORRECTED TOTAL	293	19631499.62454347			
R-SQUARE	C.V.	ROOT MSE	NVI4 MEAN		
0.751581	26.9004	163.69427282	608.52004679		

SOURCE	DF	TYPE I SS	F VALUE	PR > F
REGION	5	5200781.22802708	38.82	0.0001
INSTALLATION (REGION)	43	6133513.03860252	5.32	0.0001
BLOCK (REGION*INSTALL)	49	1330251.84960981	1.01	0.4598
TREATMENT	2	790835.67925504	14.76	0.0001
REGION*TREATMENT	10	567289.09199143	2.12	0.0252
BAO	1	550693.12135609	20.55	0.0001
BAO*BAO	1	181297.29378379	6.77	0.0101

SOURCE	DF	TYPE III SS	F VALUE	PR > F
REGION	5	2966723.81696190	22.14	0.0001
INSTALLATION (REGION)	43	5538993.92525624	4.81	0.0001
BLOCK (REGION*INSTALL)	49	807741.94022572	0.62	0.9764
TREATMENT	2	896320.59869067	16.73	0.0001
REGION*TREATMENT	10	492083.23875378	1.84	0.0571
BAO	1	363106.57950633	13.55	0.0003
BAO*BAO	1	181297.29378379	6.77	0.0101

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	-300.92351343	-1.39	0.1651	215.93402702
REGION				
CEN IDAHO	174.80656300	1.23	0.2211	142.36066878
CEN WASHINGTON	58.24497205	0.42	0.6785	140.26962869
MONTANA	205.65768465	1.17	0.2446	176.16006015
N IDAHO	742.33118562	5.14	0.0001	144.33707179
NE OREGON	-140.10276884	-0.90	0.3672	154.98896100
NE WASHINGTON	0.00000000	.	.	.

Table 5 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
 GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVI4

4 YR NET VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INSTALLATION (REGION)				
103 CEN IDAHO	25.00406930	0.19	0.8526	134.37306222
201 CEN IDAHO	51.99982114	0.39	0.6997	134.61883942
202 CEN IDAHO	110.77630411	0.75	0.4552	148.03236528
203 CEN IDAHO	-6.55822756	-0.05	0.9610	134.04081878
219 CEN IDAHO	-15.25177633	-0.11	0.9093	133.73165272
220 CEN IDAHO	-199.84479181	-1.49	0.1374	133.93412906
221 CEN IDAHO	-108.88457360	-0.81	0.4164	133.67308594
222 CEN IDAHO	-81.94256527	-0.61	0.5439	134.74803228
223 CEN IDAHO	0.00000000	.	.	.
105 CEN WASHINGTON	203.44292745	1.52	0.1300	133.75989083
224 CEN WASHINGTON	477.77945817	3.56	0.0005	134.28072225
225 CEN WASHINGTON	376.03928748	2.80	0.0057	134.53206544
226 CEN WASHINGTON	259.32502355	1.85	0.0665	140.45256559
227 CEN WASHINGTON	256.22472025	1.86	0.0648	137.89224345
228 CEN WASHINGTON	298.10328521	2.23	0.0273	133.93687719
229 CEN WASHINGTON	398.29973389	2.95	0.0036	135.11889842
230 CEN WASHINGTON	295.42133884	2.20	0.0293	134.51567750
241 CEN WASHINGTON	435.13511919	3.22	0.0015	135.31325490
242 CEN WASHINGTON	0.00000000	.	.	.
231 MONTANA	-142.39487517	-0.97	0.3321	146.41720110
232 MONTANA	-57.46529686	-0.34	0.7307	166.72014784
233 MONTANA	-100.60721701	-0.60	0.5496	167.81869838
234 MONTANA	20.02979666	0.12	0.9042	166.11186972
235 MONTANA	-414.95214206	-2.58	0.0106	160.61862875
236 MONTANA				

Table 5 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVI4

4 YR NET VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-412.45542282	-2.41	0.0169	170.99816474
237 MONTANA	-343.13474725	-2.08	0.0393	165.26727548
238 MONTANA	0.00000000	.	.	.
204 N IDAHO	-203.97522568	-1.42	0.1566	143.41152653
205 N IDAHO	-266.85006115	-1.90	0.0589	140.40386696
206 N IDAHO	-114.32485573	-0.85	0.3944	133.92187085
208 N IDAHO	-740.35043573	-5.50	0.0001	134.61236988
240 N IDAHO	0.00000000	.	.	.
104 NE OREGON	392.90079312	2.58	0.0105	152.03044985
207 NE OREGON	46.46962858	0.33	0.7432	141.61624541
212 NE OREGON	331.20608685	2.16	0.0324	153.59705646
213 NE OREGON	-219.24366843	-1.46	0.1470	150.52345167
239 NE OREGON	195.86378453	1.46	0.1451	133.83240080
244 NE OREGON	342.74343189	1.79	0.0750	191.41596486
245 NE OREGON	0.00000000	.	.	.
106 NE WASHINGTON	293.29641101	2.11	0.0364	139.13301621
209 NE WASHINGTON	224.44722051	1.68	0.0949	133.69851299
210 NE WASHINGTON	-79.55289702	-0.59	0.5530	133.83211987
211 NE WASHINGTON	247.68922594	1.82	0.0699	135.82723740
214 NE WASHINGTON	392.18794594	2.82	0.0053	139.02471830
215 NE WASHINGTON	449.95033100	3.15	0.0019	143.04626700
216 NE WASHINGTON	-65.73566918	-0.49	0.6240	133.85696170
217 NE WASHINGTON	179.44593019	1.32	0.1883	135.89155529
218 NE WASHINGTON	181.22895512	1.30	0.1951	139.36067478
243 NE WASHINGTON	0.00000000	.	.	.
BLOCK (REGION*INSTALL)	1 CEN IDAHO	103	.	.

Table 5 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVI4

4 YR NET VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-94.33279040	-0.70	0.4840	134.51988039
2 CEN IDAHO	103			
	0.00000000			
1 CEN IDAHO	201			
	-92.72568174	-0.66	0.5100	140.47659434
2 CEN IDAHO	201			
	0.00000000			
1 CEN IDAHO	202			
	-103.39314346	-0.76	0.4475	135.83536564
2 CEN IDAHO	202			
	0.00000000			
1 CEN IDAHO	203			
	-59.00637318	-0.44	0.6598	133.83754469
2 CEN IDAHO	203			
	0.00000000			
1 CEN IDAHO	219			
	82.73770187	0.62	0.5370	133.76129278
2 CEN IDAHO	219			
	0.00000000			
1 CEN IDAHO	220			
	-16.49580211	-0.12	0.9019	133.70011101
2 CEN IDAHO	220			
	0.00000000			
1 CEN IDAHO	221			
	-42.55175344	-0.32	0.7506	133.68074810
2 CEN IDAHO	221			
	0.00000000			
1 CEN IDAHO	222			
	31.81800033	0.24	0.8124	133.83743612
2 CEN IDAHO	222			
	0.00000000			
1 CEN IDAHO	223			
	152.21527929	1.14	0.2575	134.00392959
2 CEN IDAHO	223			
	0.00000000			
1 CEN WASHINGTON	105			
	16.15877472	0.12	0.9042	134.10397266
2 CEN WASHINGTON	105			
	0.00000000			
1 CEN WASHINGTON	224			
	-46.29137643	-0.34	0.7327	135.34615320
2 CEN WASHINGTON	224			
	0.00000000			
1 CEN WASHINGTON	225			
	151.11120549	1.11	0.2691	136.32472518
2 CEN WASHINGTON	225			
	0.00000000			
1 CEN WASHINGTON	226			
	27.32280554	0.20	0.8383	133.69917505
2 CEN WASHINGTON	226			

Table 5 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVI4

4 YR NET VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.00000000	.	.	.
1 CEN WASHINGTON	227	.	.	.
2 CEN WASHINGTON	36.29071E08	0.27	0.7864	133.71723390
	0.00000000	.	.	.
1 CEN WASHINGTON	228	.	.	.
2 CEN WASHINGTON	-64.64718134	-0.48	0.6292	133.66804250
	0.00000000	.	.	.
1 CEN WASHINGTON	229	.	.	.
2 CEN WASHINGTON	-18.74514478	-0.14	0.8891	134.26015675
	0.00000000	.	.	.
1 CEN WASHINGTON	230	.	.	.
2 CEN WASHINGTON	173.70839739	1.30	0.1957	133.75025679
	0.00000000	.	.	.
1 CEN WASHINGTON	241	.	.	.
2 CEN WASHINGTON	-126.46495674	-0.94	0.3465	133.99290539
	0.00000000	.	.	.
1 CEN WASHINGTON	242	.	.	.
2 CEN WASHINGTON	36.44080E25	0.27	0.7872	134.76921266
	0.00000000	.	.	.
1 MONTANA	231	.	.	.
2 MONTANA	-62.25986499	-0.46	0.6464	135.50527667
	0.00000000	.	.	.
1 MONTANA	232	.	.	.
2 MONTANA	94.69713214	0.71	0.4796	133.67907585
	0.00000000	.	.	.
1 MONTANA	233	.	.	.
2 MONTANA	75.10020E99	0.56	0.5751	133.73719991
	0.00000000	.	.	.
1 MONTANA	234	.	.	.
2 MONTANA	-49.56744892	-0.37	0.7117	133.90272095
	0.00000000	.	.	.
1 MONTANA	235	.	.	.
2 MONTANA	128.39571774	0.96	0.3403	134.30639187
	0.00000000	.	.	.
1 MONTANA	236	.	.	.
2 MONTANA	14.95641C15	0.11	0.9114	134.23182972
	0.00000000	.	.	.
1 MONTANA	237	.	.	.

Table 5 (continued)

**FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE**

DEPENDENT VARIABLE: NVI4

4 YR NET VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-32.90303799	-0.24	0.8074	134.75929997
2 MONTANA	237 0.00000000	.	.	.
1 MONTANA	238 36.25844904	0.27	0.7877	134.44237763
2 MONTANA	238 0.00000000	.	.	.
1 N IDAHO	204 -107.53825151	-0.79	0.4325	136.69003548
2 N IDAHO	204 0.00000000	.	.	.
1 N IDAHO	205 285.83760750	2.12	0.0356	135.02663321
2 N IDAHO	205 0.00000000	.	.	.
1 N IDAHO	206 -215.13224172	-1.57	0.1181	136.99051329
2 N IDAHO	206 0.00000000	.	.	.
1 N IDAHO	208 177.15453657	1.32	0.1885	134.19566532
2 N IDAHO	208 0.00000000	.	.	.
1 N IDAHO	240 -187.45609633	-1.39	0.1676	135.31328155
2 N IDAHO	240 0.00000000	.	.	.
1 NE OREGON	104 -25.33424672	-0.19	0.8500	133.75758614
2 NE GREGON	104 0.00000000	.	.	.
1 NE OREGON	207 72.65752037	0.54	0.5888	134.17009145
2 NE OREGON	207 0.00000000	.	.	.
1 NE OREGON	212 -85.73754378	-0.64	0.5233	134.06038497
2 NE OREGON	212 0.00000000	.	.	.
1 NE OREGON	213 285.06959905	2.12	0.0353	134.41241903
2 NE OREGON	213 0.00000000	.	.	.
1 NE OREGON	239 -187.06663879	-1.38	0.1701	135.80809547
2 NE OREGON	239 0.00000000	.	.	.
1 NE OREGON	244 54.92955268	0.39	0.6933	139.06675778
2 NE OREGON	244 0.00000000	.	.	.

Table 5 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVI4

4 YR NET VOLUME GROWTH (CU.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.0000000	.	.	.
1 NE OREGON	245 65.14363778	0.48	0.6300	134.98097893
2 NE OREGON	245 0.0000000	.	.	.
1 NE WASHINGTON	106 44.09960972	0.33	0.7423	133.92196971
2 NE WASHINGTON	106 0.0000000	.	.	.
1 NE WASHINGTON	209 -93.40269890	-0.70	0.4858	133.72892355
2 NE WASHINGTON	209 0.0000000	.	.	.
1 NE WASHINGTON	210 -26.82085125	-0.20	0.8415	133.89424008
2 NE WASHINGTON	210 0.0000000	.	.	.
1 NE WASHINGTON	211 -12.73877080	-0.09	0.9246	134.35664293
2 NE WASHINGTON	211 0.0000000	.	.	.
1 NE WASHINGTON	214 30.95830720	0.23	0.8174	133.90155830
2 NE WASHINGTON	214 0.0000000	.	.	.
1 NE WASHINGTON	215 -32.71332989	-0.24	0.8096	135.60762299
2 NE WASHINGTON	215 0.0000000	.	.	.
1 NE WASHINGTON	216 4.07850603	0.03	0.9757	133.88508322
2 NE WASHINGTON	216 0.0000000	.	.	.
1 NE WASHINGTON	217 0.25344412	0.00	0.9985	133.76533966
2 NE WASHINGTON	217 0.0000000	.	.	.
1 NE WASHINGTON	218 17.30797315	0.13	0.8971	133.68729977
2 NE WASHINGTON	218 0.0000000	.	.	.
1 NE WASHINGTON	243 70.03402395	0.52	0.6065	135.71816697
2 NE WASHINGTON	243 0.0000000	.	.	.
TREATMENT	CONTROL	-33.96799161	-0.66	51.76548833
	200 LB N	65.69006280	1.27	51.83743876
	400 LB N	0.0000000	.	.
REGION*TREATMENT	CEN IDAHO	CONTROL	-1.08	75.62353819
		-81.58414599		

Table 5 (continued)

FOUR-YEAR GROWTH MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVI4

4 YR NET VOLUME GROWTH (CU-PT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
CEN IDAHO	200 LB N			
	-67.54146606	-0.90	0.3707	75.25929392
CEN IDAHO	400 LB N			
	0.00000000	.	.	.
CEN WASHINGTON	CONTROL			
	-226.32611754	-3.09	0.0023	73.25340616
CEN WASHINGTON	200 LB N			
	-172.39298019	-2.33	0.0209	74.00796511
CEN WASHINGTON	400 LB N			
	0.00000000	.	.	.
MONTANA	CONTROL			
	-2.36709932	-0.03	0.9758	77.77948491
MONTANA	200 LB N			
	-28.79027228	-0.37	0.7114	77.68626379
MONTANA	400 LB N			
	0.00000000	.	.	.
N IDAHO	CONTROL			
	-210.73019375	-2.33	0.0207	90.29116896
N IDAHO	200 LB N			
	-62.77997268	-0.70	0.4852	89.77265683
N IDAHO	400 LB N			
	0.00000000	.	.	.
NE OREGON	CONTROL			
	-14.48745915	-0.17	0.8653	85.27948995
NE OREGON	200 LB N			
	-40.68862295	-0.50	0.6191	81.70299157
NE OREGON	400 LB N			
	0.00000000	.	.	.
NE WASHINGTON	CONTROL			
	0.00000000	.	.	.
NE WASHINGTON	200 LB N			
	0.00000000	.	.	.
NE WASHINGTON	400 LB N			
	0.00000000	.	.	.
BAO	9.04109237	3.68	0.0003	2.45605073
BAO*BAO	-0.02192195	-2.60	0.0101	0.00842786

Table 6

FOUR-YEAR GROWTH DESIGN MODEL--1980 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GBAI4		4 YR GROSS BASAL AREA GROWTH (SQ.FT/A)			
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	11	273.08336587	24.82576053	7.15	0.0001
ERROR	20	69.46752515	3.47337626		
CORRECTED TOTAL	31	342.55089102			

R-SQUARE	C.V.	ROOT MSE	GBAI4 MEAN
0.797205	9.5192	1.86369962	19.57836017

SOURCE	DF	TYPE I SS	F VALUE	PR > F
INSTALLATION	3	135.89357070	13.04	0.0001
TREATMENT	6	58.95170006	2.83	0.0369
BAO	1	43.15162144	12.42	0.0021
BAO*BAO	1	35.08647368	10.10	0.0047

SOURCE	DF	TYPE III SS	F VALUE	PR > F
INSTALLATION	3	143.66834920	13.79	0.0001
TREATMENT	6	86.40346132	4.15	0.0072
BAO	1	53.78599815	15.49	0.0008
BAO*BAO	1	35.08647368	10.10	0.0047

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	-6.64468160	-0.92	0.3705	7.25241346
INSTALLATION 103	-5.94430047	-6.21	0.0001	0.95662711
104	-2.95662230	-2.89	0.0090	1.02150119
105	-8.06571395	-3.84	0.0010	2.09908430
106	0.00000000			
TREATMENT CONTROL	-2.81472779	-2.43	0.0246	1.15765504
200 LB FALL	1.56596495	1.05	0.3054	1.48858409
400 LB FALL	1.41435790	1.02	0.3181	1.38127532
N+S FALL	0.71379139	0.51	0.6124	1.38687995
200 LB SPRING	-0.39017833	-0.29	0.7736	1.33805715
400 LB SPRING	2.03320225	1.49	0.1524	1.36646941
N+S SPRING	0.00000000			
BAO	0.47128194	3.94	0.0008	0.11976284
BAO*BAO	-0.00159150	-3.18	0.0047	0.00050074

Table 7

FOUR-YEAR GROWTH DESIGN MODEL—1980 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NBAI4	4 YR NET BASAL AREA GROWTH (SQ. FT/A)				
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	11	227.92877572	20.72079779	2.59	0.0309
ERROR	20	159.81118321	7.99055916		
CORRECTED TOTAL	31	387.73995893			

R-SQUARE	C.V.	ROOT MSE	NBAI4 MEAN
0.587839	15.2909	2.82675771	18.48648517

SOURCE	DF	TYPE I SS	F VALUE	PR > F
INSTALLATION	3	56.08839213	2.34	0.1041
TREATMENT	6	77.72867244	1.62	0.1930
BAO	1	91.24163639	11.42	0.0030
BAO*BAO	1	2.87007475	0.36	0.5557

SOURCE	DF	TYPE III SS	F VALUE	PR > F
INSTALLATION	3	131.24372317	5.47	0.0065
TREATMENT	6	84.21259654	1.76	0.1597
BAO	1	15.60073664	1.95	0.1776
BAO*BAO	1	2.87007475	0.36	0.5557

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	2.43166175	0.22	0.8273	11.00006434
INSTALLATION 103	-4.70486649	-3.24	0.0041	1.45095972
104	-0.89512288	-0.58	0.5699	1.54935717
105	-11.22500184	-3.53	0.0021	3.18377634
106	0.00000000			
TREATMENT CONTROL	-3.23918787	-1.84	0.0799	1.75586789
200 LB FALL	-0.69931743	-0.31	0.7600	2.25780298
400 LB FALL	-1.23875484	-0.59	0.5610	2.09504290
N+S FALL	-0.01528293	-0.01	0.9943	2.10354371
200 LB SPRING	-2.05243501	-1.01	0.3239	2.02949195
400 LB SPRING	1.96738967	0.95	0.3538	2.07258611
N+S SPRING	0.00000000			
BAO	0.25381585	1.40	0.1776	0.18164973
BAO*BAO	-0.00045518	-0.60	0.5557	0.00075950

Table 8

FOUR-YEAR GROWTH DESIGN MODEL--1980 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: HTINC4		4 YR MEAN HEIGHT INC (PT/TREE)			
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	11	46.99544348	4.27231304	10.58	0.0001
ERROR	20	8.07452802	0.40372640		
CORRECTED TOTAL	31	55.06997150			

R-SQUARE	C.V.	ROOT MSE	HTINC4 MEAN
0.853377	14.6637	0.63539468	4.33312500

SOURCE	DF	TYPE I SS	F VALUE	PR > F
INSTALLATION	3	42.92272050	35.44	0.0001
TREATMENT	6	2.15071650	0.89	0.5220
EA0	1	0.11391696	0.28	0.6011
BA0*BA0	1	1.80808952	4.48	0.0471

SOURCE	DF	TYPE III SS	F VALUE	PR > F
INSTALLATION	3	27.54026514	22.74	0.0001
TREATMENT	6	2.94963167	1.22	0.3383
EA0	1	1.92199776	4.76	0.0412
BA0*BA0	1	1.80808952	4.48	0.0471

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	0.86629480	0.35	0.7297	2.47257922
INSTALLATION 103	-2.66589339	-8.17	0.0001	0.32614472
104	-0.70607742	-2.03	0.0562	0.34826236
105	-2.75039094	-3.84	0.0010	0.71564483
106	0.00000000			
TREATMENT CONTROL	-0.49551823	-1.26	0.2238	0.39468155
200 LB FALL	0.50855417	1.00	0.3283	0.50750582
400 LB FALL	-0.09981152	-0.21	0.8343	0.47092084
N+S FALL	0.17504243	0.37	0.7151	0.47283164
200 LB SPRING	-0.09769702	-0.21	0.8326	0.45618639
400 LB SPRING	0.25027422	0.54	0.5970	0.46587303
N+S SPRING	0.00000000			
EA0	0.08908870	2.18	0.0412	0.04083098
BA0*BA0	-0.00036128	-2.12	0.0471	0.00017072

Table 9

FOUR-YEAR GROWTH DESIGN MODEL--1980 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: GVI4		4 YR GROSS VOLUME GROWTH (CU.FT/A)			
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	11	731773.39704755	66524.85427705	11.67	0.0001
ERROR	20	114047.06037964	5702.35301898		
CORRECTED TOTAL	31	845820.45742718			
R-SQUARE	C.V.	ROOT MSE	GVI4 MEAN		
0.865164	11.8964	75.51392599	634.76258835		
SOURCE	DF	TYPE I SS	F VALUE	PR > F	
INSTALLATION	3	485160.61961875	28.36	0.0001	
TREATMENT	6	68074.02708093	1.99	0.1152	
BAO	1	92705.55764538	16.26	0.0007	
BAO*BAO	1	85833.19270249	15.05	0.0009	
SOURCE	DF	TYPE III SS	F VALUE	PR > F	
INSTALLATION	3	237538.27322651	13.89	0.0001	
TREATMENT	6	134153.82977480	3.92	0.0094	
BAO	1	128025.22016108	22.45	0.0001	
BAO*BAO	1	85833.19270249	15.05	0.0009	
PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE	
INTERCEPT	-718.18453770	-2.44	0.0239	293.85540926	
INSTALLATION 103	-247.65558128	-6.39	0.0001	38.76089714	
104	-122.50987928	-2.96	0.0077	41.38948375	
105	-162.34490674	-1.91	0.0707	85.05131164	
106	0.00000000				
TREATMENT CONTROL	-91.21705711	-1.94	0.0660	46.90620553	
200 LB FALL	116.04193059	1.92	0.0687	60.31488529	
400 LB FALL	49.91344570	0.89	0.3831	55.96691721	
N+S FALL	63.65110170	1.13	0.2707	56.19400744	
200 LB SPRING	-19.69454226	-0.36	0.7202	54.21579097	
400 LB SPRING	60.69878433	1.10	0.2860	55.36700700	
N+S SPRING	0.00000000				
BAO	22.99291043	4.74	0.0001	4.85258590	
BAO*BAO	-0.07871626	-3.88	0.0009	0.02028915	

Table 10

FOUR-YEAR GROWTH DESIGN MODEL--1980 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVI4	4 YR NET VOLUME GROWTH (CU.FT/A)				
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	11	632802.13162465	57527.46651133	6.99	0.0001
ERROR	20	164700.82864050	8235.04143202		
CORRECTED TCTAL	31	797502.96026515			

R-SQUARE	C.V.	ROOT MSE	NVI4 MEAN	
0.793479	14.8684	90.74712906	610.33758835	

SOURCE	DF	TYPE I SS	F VALUE	PR > F
INSTALLATION	3	355822.75389090	14.40	0.0001
TREATMENT	6	90043.03942071	1.82	0.1456
EA0	1	159538.38196105	19.37	0.0003
EA0*BA0	1	27397.95635198	3.33	0.0831

SOURCE	DF	TYPE III SS	F VALUE	PR > F
INSTALLATION	3	210730.93139060	8.53	0.0008
TREATMENT	6	115710.98064406	2.34	0.0708
EA0	1	66071.69760732	8.02	0.0103
EA0*BA0	1	27397.95635198	3.33	0.0831

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	-425.98258808	-1.21	0.2418	353.13400008
INSTALLATION 103	-231.73845466	-4.98	0.0001	46.58001937
104	-88.05267357	-1.77	0.0919	49.73886305
105	-293.11526404	-2.87	0.0095	102.20846357
106	0.00000000	-	-	-
TREATMENT CCNTRGL	-105.55948782	-1.87	0.0758	56.36845696
200 LB FALL	57.06517772	0.79	0.4403	72.48203040
400 LB FALL	-33.69562913	-0.50	0.6218	67.25695946
N+S FALL	35.24747055	0.52	0.6074	67.52985994
200 LB SPRING	-48.85093808	-0.75	0.4621	65.15258365
400 LB SPRING	63.00488164	0.95	0.3550	66.53603112
N+S SPRING	0.00000000	-	-	-
EA0	16.51786509	2.83	0.0103	5.83148384
EA0*BA0	-0.04447295	-1.82	0.0831	0.02438202

Table 11

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MBA4		4 YR DEAD BASAL AREA (SQ. FT/A)			
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	111	3025.24879232	27.25449362	1.49	0.0085
ERROR	182	3327.02372839	18.28035016		
CORRECTED TOTAL	293	6352.27252071			
R-SQUARE	C.V.	ROOT MSE	MBA4 MEAN		
0.476247	239.7758	4.27555261	1.78314626		
SOURCE	DF	TYPE I SS	F VALUE	PR > F	
REGION	5	692.19151320	7.57	0.0001	
INSTALLATION (REGION)	43	1782.07349735	2.27	0.0001	
BLOCK (REGION*INSTALL)	49	313.96470950	0.35	1.0000	
TREATMENT	2	79.85300409	2.18	0.1155	
REGION*TREATMENT	10	106.96190078	0.59	0.8249	
BAO	1	35.68472805	1.95	0.1641	
BAO*BAO	1	14.51943936	0.79	0.3740	
SCURCE	DF	TYPE III SS	F VALUE	PR > F	
REGION	5	391.46392314	4.28	0.0011	
INSTALLATION (REGION)	43	1530.92873194	1.95	0.0013	
BLCK (REGION*INSTALL)	49	326.58040034	0.36	1.0000	
TREATMENT	2	43.59843494	1.19	0.3058	
REGION*TREATMENT	10	107.07149941	0.59	0.8244	
BAO	1	4.59250033	0.25	0.6168	
BAO*BAO	1	14.51943936	0.79	0.3740	
PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE	
INTERCEPT	7.29614185	1.29	0.1974	5.64000974	
REGION	CEN IDAHO	-6.19592882	-1.67	0.0974	3.71833736
	CEN WASHINGTON	-6.73513614	-1.84	0.0676	3.66372120
	MONTANA	-5.63485497	-1.22	0.2223	4.60114818
	N IDAHO	-7.54466364	-2.00	0.0469	3.76995929
	NE OREGON	-1.98119254	-0.49	0.6251	4.04817741
	NE WASHINGTON	0.00000000	.	.	.

Table 11 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MBAQ

4 YR DEAD BASAL AREA (SQ.-FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INSTALLATION (REGION)				
103 CEN IDAHO	1.02721672	0.29	0.7701	3.50970799
201 CEN IDAHO	-0.39746521	-0.11	0.9101	3.51612748
202 CEN IDAHO	0.16705492	0.04	0.9656	3.86647716
203 CEN IDAHO	0.44470223	0.13	0.8991	3.50103008
219 CEN IDAHO	-0.13601301	-0.04	0.9690	3.49295493
220 CEN IDAHO	1.64591575	0.47	0.6386	3.49824344
221 CEN IDAHO	-0.08710695	-0.02	0.9801	3.49142522
222 CEN IDAHO	-0.52255676	-0.15	0.8821	3.51950188
223 CEN IDAHO	0.00000000	.	.	.
105 CEN WASHINGTON	-0.18236701	-0.05	0.9584	3.49369249
224 CEN WASHINGTON	-0.54238168	-0.15	0.8773	3.50729615
225 CEN WASHINGTON	0.55974626	0.16	0.8736	3.51386102
226 CEN WASHINGTON	1.03237639	0.28	0.7787	3.66849935
227 CEN WASHINGTON	0.84314048	0.23	0.8152	3.60162596
228 CEN WASHINGTON	1.31469686	0.38	0.7075	3.49831522
229 CEN WASHINGTON	0.74609211	0.21	0.8328	3.52918859
230 CEN WASHINGTON	0.60942342	0.17	0.8625	3.51343298
241 CEN WASHINGTON	0.74361237	0.21	0.8336	3.53426501
242 CEN WASHINGTON	0.00000000	.	.	.
231 MONTANA	0.29271763	0.08	0.9391	3.82429047
232 MONTANA	1.25017617	0.29	0.7744	4.35458585
233 MONTANA	-0.40953062	-0.09	0.9257	4.38327904
234 MONTANA	-0.31976968	-0.07	0.9413	4.33869815
235 MONTANA	5.71749129	1.36	0.1746	4.19521946
236 MONTANA				

Table 11 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MEA4

4 YR DEAD BASAL AREA (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	-1.48106315	-0.33	0.7406	4.46632394
237 MONTANA	-0.28397285	-0.07	0.9476	4.31663808
238 MONTANA	0.00000000	.	.	.
204 N IDAHO	4.74572871	1.27	0.2068	3.74578485
205 N IDAHO	3.62332539	0.99	0.3244	3.66722739
206 N IDAHO	0.79153620	0.23	0.8212	3.49792326
208 N IDAHO	0.63956148	0.18	0.8559	3.51595850
240 N IDAHO	0.00000000	.	.	.
104 NE OREGON	-3.72290036	-0.94	0.3497	3.97090366
207 NE OREGON	4.96472741	1.34	0.1812	3.69889366
212 NE OREGON	-3.72657706	-0.93	0.3542	4.01182207
213 NE OREGON	7.89582575	2.01	0.0461	3.93154217
239 NE OREGON	-3.46792214	-0.99	0.3225	3.49558638
244 NE OREGON	-11.47509709	-2.30	0.0229	4.99961920
245 NE OREGON	0.00000000	.	.	.
106 NE WASHINGTON	-1.67425631	-0.46	0.6456	3.63403387
209 NE WASHINGTON	-4.54526017	-1.30	0.1947	3.49208935
210 NE WASHINGTON	2.89578842	0.83	0.4085	3.49557905
211 NE WASHINGTON	7.74135534	2.18	0.0304	3.54768979
214 NE WASHINGTON	-3.78395242	-1.04	0.2988	3.63120522
215 NE WASHINGTON	-3.77632547	-1.01	0.3135	3.73624459
216 NE WASHINGTON	2.49236237	0.71	0.4768	3.49622789
217 NE WASHINGTON	-3.64799225	-1.03	0.3054	3.54936971
218 NE WASHINGTON	-3.81310959	-1.05	0.2962	3.63998011
243 NE WASHINGTON	0.00000000	.	.	.
BLOCK (REGION*INSTALL) 1 CEN IDAHO	103	.	.	.

Table 11 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS
GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MBA4

4 YR DEAD BASAL AREA (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.23413855	0.07	0.9469	3.51354275
2 CEN IDAHO	103 0.00000000	.	.	.
1 CEN IDAHO	201 0.66859094	0.18	0.8556	3.66912696
2 CEN IDAHO	201 0.00000000	.	.	.
1 CEN IDAHO	202 0.11965235	0.03	0.9731	3.54790209
2 CEN IDAHO	202 0.00000000	.	.	.
1 CEN IDAHO	203 -0.20360318	-0.06	0.9536	3.49572074
2 CEN IDAHO	203 0.00000000	.	.	.
1 CEN IDAHO	219 -0.10224713	-0.03	0.9767	3.49372910
2 CEN IDAHO	219 0.00000000	.	.	.
1 CEN IDAHO	220 -0.54910018	-0.16	0.8752	3.49213109
2 CEN IDAHO	220 0.00000000	.	.	.
1 CEN IDAHO	221 1.44682072	0.41	0.6791	3.49162535
2 CEN IDAHO	221 0.00000000	.	.	.
1 CEN IDAHO	222 0.22559948	0.06	0.9486	3.49571790
2 CEN IDAHO	222 0.00000000	.	.	.
1 CEN IDAHO	223 0.17452429	0.05	0.9603	3.50006657
2 CEN IDAHO	223 0.00000000	.	.	.
1 CEN WASHINGTON	105 4.19787258	1.20	0.2323	3.50267960
2 CEN WASHINGTON	105 0.00000000	.	.	.
1 CEN WASHINGTON	224 2.49571551	0.71	0.4811	3.53512428
2 CEN WASHINGTON	224 0.00000000	.	.	.
1 CEN WASHINGTON	225 0.46534080	0.13	0.8962	3.56068374
2 CEN WASHINGTON	225 0.00000000	.	.	.
1 CEN WASHINGTON	226 -0.01836968	-0.01	0.9958	3.49210664
2 CEN WASHINGTON	226			

Table 11 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MPA4

4 YR DEAD BASAL AREA (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR H ₀ : PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
1 CEN WASHINGTON	0.00000000	-	-	-
2 CEN WASHINGTON	0.11488729	0.03	0.9738	3.49257832
1 CEN WASHINGTON	0.00000000	-	-	-
2 CEN WASHINGTON	0.26940663	0.08	0.9386	3.49129349
1 CEN WASHINGTON	0.00000000	-	-	-
2 CEN WASHINGTON	-0.39282571	-0.11	0.9109	3.50675900
1 CEN WASHINGTON	0.00000000	-	-	-
2 CEN WASHINGTON	0.14804865	0.04	0.9662	3.49344085
1 CEN WASHINGTON	0.00000000	-	-	-
2 CEN WASHINGTON	3.02737433	0.87	0.3882	3.49977862
1 CEN WASHINGTON	0.00000000	-	-	-
2 CEN WASHINGTON	2.03745458	0.58	0.5634	3.52005510
1 MONTANA	0.00000000	-	-	-
2 MONTANA	-0.14779452	-0.04	0.9667	3.53928045
1 MONTANA	0.00000000	-	-	-
2 MONTANA	-1.61293284	-0.46	0.6447	3.49158167
1 MONTANA	0.00000000	-	-	-
2 MONTANA	-0.18034673	-0.05	0.9589	3.49309982
1 MONTANA	0.00000000	-	-	-
2 MONTANA	0.19244581	0.06	0.9562	3.49742308
1 MONTANA	0.00000000	-	-	-
2 MONTANA	-4.27630713	-1.22	0.2244	3.50796662
1 MONTANA	0.00000000	-	-	-
2 MONTANA	0.53441736	0.15	0.8790	3.50601912
1 MONTANA	0.00000000	-	-	-

Table 11 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MBA4

4 YR DEAD BASAL AREA (SQ.FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	1.12995369	0.32	0.7486	3.51979619
2 MONTANA	237 0.00000000	.	.	.
1 MONTANA	238 0.13150613	0.04	0.9702	3.51151845
2 MONTANA	238 0.00000000	.	.	.
1 N IDAHO	204 3.30727921	0.93	0.3555	3.57022533
2 N IDAHO	204 0.00000000	.	.	.
1 N IDAHO	205 -2.57264105	-0.73	0.4667	3.52677870
2 N IDAHO	205 0.00000000	.	.	.
1 N IDAHO	206 0.72591129	0.20	0.8395	3.57807355
2 N IDAHO	206 0.00000000	.	.	.
1 N IDAHO	208 -1.77192358	-0.51	0.6138	3.50507454
2 N IDAHO	208 0.00000000	.	.	.
1 N IDAHO	240 2.75452142	0.78	0.4368	3.53426571
2 N IDAHO	240 0.00000000	.	.	.
1 NE OREGON	104 0.00657940	0.00	0.9985	3.49363229
2 NE OREGON	104 0.00000000	.	.	.
1 NE OREGON	207 1.59828531	0.46	0.6489	3.50440657
2 NE OREGON	207 0.00000000	.	.	.
1 NE OREGON	212 -0.01183194	-0.00	0.9973	3.50154113
2 NE OREGON	212 0.00000000	.	.	.
1 NE OREGON	213 -5.23712055	-1.49	0.1375	3.51073596
2 NE OREGON	213 0.00000000	.	.	.
1 NE OREGON	239 6.97426674	1.97	0.0508	3.54718982
2 NE OREGON	239 0.00000000	.	.	.
1 NE OREGON	244 1.21634374	0.33	0.7381	3.63230325
2 NE OREGON	244			

Table 11 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MBA4

4 YR DEAD BASAL AREA (SQ. FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.00000000	.	.	.
1 NE OREGON	245	.	.	.
	-3.92622E19	-1.11	0.2669	3.52558625
2 NE OREGON	245	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	106	.	.	.
	1.30431696	0.37	0.7097	3.49792585
2 NE WASHINGTON	106	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	209	.	.	.
	2.08560370	0.60	0.5512	3.49288365
2 NE WASHINGTON	209	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	210	.	.	.
	-0.09023231	-0.03	0.9794	3.49720157
2 NE WASHINGTON	210	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	211	.	.	.
	-4.60637513	-1.31	0.1910	3.50927913
2 NE WASHINGTON	211	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	214	.	.	.
	-0.04953754	-0.01	0.9887	3.49739272
2 NE WASHINGTON	214	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	215	.	.	.
	-0.04431E46	-0.01	0.9900	3.54195365
2 NE WASHINGTON	215	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	216	.	.	.
	2.23633E60	0.64	0.5233	3.49696240
2 NE WASHINGTON	216	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	217	.	.	.
	-0.31100E32	-0.09	0.9292	3.49383480
2 NE WASHINGTON	217	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	218	.	.	.
	0.01851942	0.01	0.9958	3.49179647
2 NE WASHINGTON	218	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	243	.	.	.
	-0.94140989	-0.27	0.7909	3.54484096
2 NE WASHINGTON	243	.	.	.
	0.00000000	.	.	.
TREATMENT	CCNT60L	.	.	.
	-3.75213589	-2.78	0.0061	1.35206972
	200 LBS NITROGEN	.	.	.
	-2.92493E54	-2.16	0.0321	1.35394900
	400 LBS NITROGEN	.	.	.

Table 11 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MBA4

4 YR DEAD BASAL AREA (SQ. FT/A)

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
REGION*TREATMENT	0.0000000	.	.	.
CEN IDAHO CONTROL	3.69191760	1.87	0.0632	1.97522131
CEN IDAHO 200 LBS NITROGEN	2.74517828	1.40	0.1643	1.96570757
CEN IDAHO 400 LBS NITROGEN	0.0000000	.	.	.
CEN WASHINGTON CONTROL	3.07007713	1.60	0.1103	1.91331552
CEN WASHINGTON 200 LBS NITROGEN	2.72870734	1.41	0.1598	1.93302394
CEN WASHINGTON 400 LBS NITROGEN	0.0000000	.	.	.
MONTANA CONTROL	2.66299663	1.31	0.1916	2.03153277
MONTANA 200 LBS NITROGEN	2.04154179	1.01	0.3157	2.02909792
MONTANA 400 LBS NITROGEN	0.0000000	.	.	.
N IDAHO CONTROL	4.31812967	1.83	0.0687	2.35832712
N IDAHO 200 LBS NITROGEN	2.75223041	1.17	0.2420	2.34478404
N IDAHO 400 LBS NITROGEN	0.0000000	.	.	.
NE OREGON CONTROL	3.28605798	1.48	0.1419	2.22742641
NE OREGON 200 LBS NITROGEN	2.53392893	1.19	0.2366	2.13401137
NE OREGON 400 LBS NITROGEN	0.0000000	.	.	.
NE WASHINGTON CONTROL	0.0000000	.	.	.
NE WASHINGTON 200 LBS NITROGEN	0.0000000	.	.	.
NE WASHINGTON 400 LBS NITROGEN	0.0000000	.	.	.
BAO	-0.03215351	-0.50	0.6168	0.06414992
BAO*BAO	0.00019618	0.89	0.3740	0.00022013

Table 12

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MVOL4

4 YR DEAD VOLUME (CU.FT/A)

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F
MODEL	111	2263183.30845333	20389.03881489	1.44	0.0150
ERROR	182	2580360.44009123	14177.80461589		
CORRECTED TOTAL	293	4843543.74854455			

R-SQUARE	C.V.	RCOT MSE	MVOL4 MEAN
0.467258	263.2841	119.07058669	45.22513605

SOURCE	DF	TYPE I SS	F VALUE	PR > F
REGION	5	510127.48959879	7.20	0.0001
INSTALLATION (REGION)	43	1233889.05736243	2.02	0.0007
BLOCK (REGION*INSTALL)	49	283234.25005000	0.41	0.9998
TREATMENT	2	71398.24485782	2.52	0.0834
REGION*TREATMENT	10	75363.13671969	0.53	0.8663
BAO	1	54633.36946571	3.85	0.0512
BAO*BAO	1	34537.76039889	2.44	0.1203

SOURCE	DF	TYPE III SS	F VALUE	PR > F
REGION	5	210949.64323198	2.98	0.0132
INSTALLATION (REGION)	43	1122658.82739215	1.84	0.0031
BLOCK (REGION*INSTALL)	49	315332.92895178	0.45	0.9992
TREATMENT	2	39941.41232643	1.41	0.2471
REGION*TREATMENT	10	63792.08380412	0.45	0.9196
BAO	1	14246.82883085	1.00	0.3175
BAO*BAO	1	34537.76039889	2.44	0.1203

PARAMETER	ESTIMATE	T FOR H0: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INTERCEPT	226.74645429	1.44	0.1506	157.06958369
REGION				
CEN IDAHO	-149.36308503	-1.44	0.1509	103.55260487
CEN WASHINGTON	-168.51500764	-1.65	0.1003	102.03159033
MONTANA	-148.97415419	-1.16	0.2465	128.13815262
N IDAHO	-200.88608382	-1.91	0.0573	104.99023285
NE OREGON	-122.13040599	-1.08	0.2801	112.73837624
NE WASHINGTON	0.00000000	.	.	.

Table 12 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MVOL4

4 YR DEAD VOLUME (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
INSTALLATION (REGION)				
103 CEN IDAHO	17.95431303	0.18	0.8545	97.74245047
201 CEN IDAHO	-14.16374330	-0.14	0.8852	97.92122786
202 CEN IDAHO	-5.01986660	-0.05	0.9629	107.67817517
203 CEN IDAHO	7.19934050	0.07	0.9412	97.50077787
219 CEN IDAHO	-5.09078125	-0.05	0.9583	97.27589166
220 CEN IDAHO	38.84506570	0.40	0.6906	97.42317218
221 CEN IDAHO	-3.79385534	-0.04	0.9689	97.23329041
222 CEN IDAHO	-19.60615165	-0.20	0.8417	98.01520226
223 CEN IDAHO	0.00000000	.	.	.
105 CEN WASHINGTON	-7.04337726	-0.07	0.9424	97.29643196
224 CEN WASHINGTON	-22.12409054	-0.23	0.8211	97.67528273
225 CEN WASHINGTON	21.90486243	0.22	0.8231	97.85810881
226 CEN WASHINGTON	36.46541861	0.36	0.7216	102.16465792
227 CEN WASHINGTON	30.08679536	0.30	0.7645	100.30228942
228 CEN WASHINGTON	36.03396758	0.37	0.7119	97.42517115
229 CEN WASHINGTON	29.41834736	0.30	0.7650	98.28496887
230 CEN WASHINGTON	24.46860071	0.25	0.8028	97.84618828
241 CEN WASHINGTON	28.84694699	0.29	0.7698	98.42634302
242 CEN WASHINGTON	0.00000000	.	.	.
231 MONTANA	23.51246756	0.22	0.8255	106.50331094
232 MONTANA	50.73754170	0.42	0.6762	121.27159659
233 MONTANA	1.95788059	0.02	0.9872	122.07067804
234 MONTANA	5.21257756	0.04	0.9656	120.82913741
235 MONTANA	133.35480160	1.14	0.2552	116.83337498
236 MONTANA				

Table 12 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVOL4

4 YR DEAD VOLUME (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
237 MONTANA	-42.96149454	-0.35	0.7302	124.38340968
238 MONTANA	6.45308358	0.05	0.9572	120.21478280
204 N IDAHC	0.00000000	.	.	.
205 N IDAHO	121.72481200	1.17	0.2448	104.31699477
206 N IDAHO	107.93481144	1.06	0.2920	102.12923473
208 N IDAHO	16.91019173	0.17	0.8624	97.41425560
240 N IDAHO	8.13113433	0.08	0.9339	97.91652195
104 NE OREGON	0.00000000	.	.	.
207 NE OREGON	-0.63021404	-0.01	0.9955	110.58636656
212 NE OREGON	221.30932458	2.15	0.0330	103.01111417
213 NE OREGON	-2.20044778	-0.02	0.9843	111.72591021
239 NE OREGON	365.45985934	3.34	0.0010	109.49018187
244 NE OREGON	-17.65011215	-0.18	0.8563	97.34917543
245 NE OREGON	-334.84052221	-2.40	0.0172	139.23523924
106 NE WASHINGTON	0.00000000	.	.	.
209 NE WASHINGTON	-60.79464714	-0.60	0.5488	101.20482277
210 NE WASHINGTON	-114.50546162	-1.18	0.2406	97.25178595
211 NE WASHINGTON	70.64112775	0.73	0.4690	97.34897108
214 NE WASHINGTON	129.87325219	1.31	0.1903	98.80021193
215 NE WASHINGTON	-88.29559619	-0.87	0.3837	101.12604728
216 NE WASHINGTON	-90.63542027	-0.87	0.3849	104.05130639
217 NE WASHINGTON	76.65277617	0.79	0.4322	97.36704094
218 NE WASHINGTON	-90.08771686	-0.91	0.3633	98.84699651
243 NE WASHINGTON	-89.84910554	-0.89	0.3766	101.37042073
BLOCK (REGION*INSTALL)	0.00000000	.	.	.
1 CEN IDAHO	103	.	.	.

Table 12 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: NVOL4

4 YR DEAD VOLUME (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	9.76818749	0.10	0.9206	97.84924545
2 CEN IDAHO	103 0.00000000	-	-	-
1 CEN IDAHO	201 20.38124441	0.20	0.8421	102.18213634
2 CEN IDAHO	201 0.00000000	-	-	-
1 CEN IDAHO	202 9.57260238	0.10	0.9229	98.80612438
2 CEN IDAHO	202 0.00000000	-	-	-
1 CEN IDAHO	203 -0.15630952	-0.00	0.9987	97.35291708
2 CEN IDAHO	203 0.00000000	-	-	-
1 CEN IDAHO	219 -3.38560661	-0.03	0.9723	97.29745173
2 CEN IDAHO	219 0.00000000	-	-	-
1 CEN IDAHO	220 -13.62050810	-0.14	0.8888	97.25294834
2 CEN IDAHO	220 0.00000000	-	-	-
1 CEN IDAHO	221 30.63569715	0.32	0.7531	97.23886383
2 CEN IDAHO	221 0.00000000	-	-	-
1 CEN IDAHO	222 8.58056811	0.09	0.9299	97.35283810
2 CEN IDAHO	222 0.00000000	-	-	-
1 CEN IDAHO	223 5.65561329	0.06	0.9538	97.47394482
2 CEN IDAHO	223 0.00000000	-	-	-
1 CEN WASHINGTON	105 136.97600396	1.40	0.1620	97.54671576
2 CEN WASHINGTON	105 0.00000000	-	-	-
1 CEN WASHINGTON	224 81.27380525	0.83	0.4102	98.45027312
2 CEN WASHINGTON	224 0.00000000	-	-	-
1 CEN WASHINGTON	225 14.85048123	0.15	0.8811	99.16208263
2 CEN WASHINGTON	225 0.00000000	-	-	-
1 CEN WASHINGTON	226 -1.40940257	-0.01	0.9885	97.25226753
2 CEN WASHINGTON	226			

Table 12 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MVOL4

4 YR DEAD VOLUME (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.00000000	.	.	.
1 CEN WASHINGTON	227	.	.	.
2 CEN WASHINGTON	5.39533105	0.06	0.9558	97.26540347
	0.00000000	.	.	.
1 CEN WASHINGTON	228	.	.	.
2 CEN WASHINGTON	1.01912457	0.01	0.9916	97.22962183
	0.00000000	.	.	.
1 CEN WASHINGTON	229	.	.	.
2 CEN WASHINGTON	-14.77803816	-0.15	0.8799	97.66032347
	0.00000000	.	.	.
1 CEN WASHINGTON	230	.	.	.
2 CEN WASHINGTON	5.50892856	0.06	0.9549	97.28942419
	0.00000000	.	.	.
1 CEN WASHINGTON	241	.	.	.
2 CEN WASHINGTON	72.33530661	0.74	0.4589	97.46592586
	0.00000000	.	.	.
1 CEN WASHINGTON	242	.	.	.
2 CEN WASHINGTON	54.40510448	0.55	0.5796	98.03060878
	0.00000000	.	.	.
1 MONTANA	231	.	.	.
2 MONTANA	-2.02201560	-0.02	0.9837	98.56601893
	0.00000000	.	.	.
1 MONTANA	232	.	.	.
2 MONTANA	-47.47175184	-0.49	0.6260	97.23764745
	0.00000000	.	.	.
1 MONTANA	233	.	.	.
2 MONTANA	-7.95673985	-0.08	0.9349	97.27992666
	0.00000000	.	.	.
1 MONTANA	234	.	.	.
2 MONTANA	6.77899936	0.07	0.9446	97.40032604
	0.00000000	.	.	.
1 MONTANA	235	.	.	.
2 MONTANA	-83.76455416	-0.86	0.3923	97.69395472
	0.00000000	.	.	.
1 MONTANA	236	.	.	.
2 MONTANA	22.66017302	0.23	0.8167	97.63971849
	0.00000000	.	.	.
1 MONTANA	237	.	.	.

Table 12 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MVOL4

4 YR DEAD VOLUME (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	32.71453522	0.33	0.7390	98.02339833
2 MONTANA	237 0.00000000	.	.	.
1 MONTANA	238 8.20001273	0.08	0.9333	97.79287024
2 MONTANA	238 0.00000000	.	.	.
1 N IDAHO	204 83.81846429	0.84	0.4003	99.42780795
2 N IDAHO	204 0.00000000	.	.	.
1 N IDAHO	205 -66.20336712	-0.67	0.5011	98.21785551
2 N IDAHO	205 0.00000000	.	.	.
1 N IDAHO	206 34.89143889	0.35	0.7266	99.64637435
2 N IDAHO	206 0.00000000	.	.	.
1 N IDAHO	208 -57.35301376	-0.59	0.5576	97.61341265
2 N IDAHO	208 0.00000000	.	.	.
1 N IDAHO	240 68.84249906	0.70	0.4852	98.42636241
2 N IDAHO	240 0.00000000	.	.	.
1 NE OREGON	104 -0.71116844	-0.01	0.9942	97.29475553
2 NE OREGON	104 0.00000000	.	.	.
1 NE OREGON	207 39.72008444	0.41	0.6845	97.59481032
2 NE OREGON	207 0.00000000	.	.	.
1 NE OREGON	212 1.47311335	0.02	0.9880	97.51501024
2 NE OREGON	212 0.00000000	.	.	.
1 NE OREGON	213 -174.86338230	-1.79	0.0754	97.77107847
2 NE OREGON	213 0.00000000	.	.	.
1 NE OREGON	239 302.41652570	3.06	0.0025	98.78628816
2 NE OREGON	239 0.00000000	.	.	.
1 NE OREGON	244 55.94303415	0.55	0.5809	101.15662664
2 NE OREGON	244			

Table 12 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MVOL4

4 YR DEAD VOLUME (CU-FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.00000000	.	.	.
1 NE OREGON	245	.	.	.
	-53.81664772	-0.55	0.5843	98.18464676
2 NE OREGON	245	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	106	.	.	.
	42.26636461	0.43	0.6649	97.41432751
2 NE WASHINGTON	106	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	209	.	.	.
	59.94688109	0.62	0.5385	97.27390647
2 NE WASHINGTON	209	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	210	.	.	.
	-28.39396236	-0.29	0.7710	97.39415709
2 NE WASHINGTON	210	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	211	.	.	.
	-91.86563993	-0.94	0.3485	97.73050715
2 NE WASHINGTON	211	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	214	.	.	.
	-3.59582566	-0.04	0.9706	97.39948033
2 NE WASHINGTON	214	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	215	.	.	.
	-6.19232666	-0.06	0.9500	98.64046525
2 NE WASHINGTON	215	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	216	.	.	.
	69.03987839	0.71	0.4793	97.38749642
2 NE WASHINGTON	216	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	217	.	.	.
	-2.51599652	-0.03	0.9794	97.30039541
2 NE WASHINGTON	217	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	218	.	.	.
	1.31940003	0.01	0.9892	97.24362950
2 NE WASHINGTON	218	.	.	.
	0.00000000	.	.	.
1 NE WASHINGTON	243	.	.	.
	-28.33230412	-0.29	0.7744	98.72087451
2 NE WASHINGTON	243	.	.	.
	0.00000000	.	.	.
TREATMENT	CCNTROL	.	.	.
	-86.17381645	-2.29	0.0233	37.65401782
	200 LBS NITROGEN	.	.	.
	-77.92327317	-2.07	0.0402	37.70635428
	400 LBS NITROGEN	.	.	.

Table 12 (continued)

FOUR-YEAR MORTALITY MODELS--1980 AND 1981 INSTALLATIONS
 GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: MVOL4

4 YR DEAD VOLUME (CU.FT/A)

PARAMETER	ESTIMATE	T FOR HO: PARAMETER=0	PR > |T|	STD ERROR OF ESTIMATE
	0.0000000	-	-	-
REGION*TREATMENT	CONTROL			
CEN IDAHO	84.02761543	1.53	0.1284	55.00827185
CEN IDAHO	200 LBS NITROGEN			
CEN IDAHO	75.79968116	1.38	0.1679	54.74332196
CEN IDAHO	400 LBS NITROGEN			
CEN IDAHO	0.0000000	-	-	-
CEN WASHINGTON	CONTROL			
CEN WASHINGTON	64.98320383	1.22	0.2242	53.28424690
CEN WASHINGTON	200 LBS NITROGEN			
CEN WASHINGTON	64.94851741	1.21	0.2292	53.83311019
CEN WASHINGTON	400 LBS NITROGEN			
CEN WASHINGTON	0.0000000	-	-	-
MCNTANA	CONTROL			
MONTANA	55.70621188	0.98	0.3261	56.57649923
MONTANA	200 LBS NITROGEN			
MONTANA	51.27844614	0.91	0.3654	56.50869055
MONTANA	400 LBS NITROGEN			
MONTANA	0.0000000	-	-	-
N IDAHO	CONTROL			
N IDAHO	110.85175276	1.69	0.0932	65.67745026
N IDAHO	200 LBS NITROGEN			
N IDAHO	69.52656990	1.06	0.2884	65.30028653
N IDAHO	400 LBS NITROGEN			
N IDAHO	0.0000000	-	-	-
NE OREGON	CONTROL			
NE OREGON	53.59492529	0.86	0.3887	62.03197416
NE OREGON	200 LBS NITROGEN			
NE OREGON	44.95679381	0.76	0.4504	59.43044294
NE OREGON	400 LBS NITROGEN			
NE OREGON	0.0000000	-	-	-
NE WASHINGTON	CONTROL			
NE WASHINGTON	0.0000000	-	-	-
NE WASHINGTON	200 LBS NITROGEN			
NE WASHINGTON	0.0000000	-	-	-
NE WASHINGTON	400 LBS NITROGEN			
NE WASHINGTON	0.0000000	-	-	-
BAO	-1.79086542	-1.00	0.3175	1.78652189
BAO*BAO	0.00956821	1.56	0.1203	0.00613039

SECTION II

The Relationships Between Basal Area at the Time of Treatment and the Growth Response Variables Documented in the Statistical Models in Section I

Figures 1 through 6	Gross Basal Area
Figures 7 through 12	Net Basal Area
Figures 13 through 18	Height Increment
Figures 19 through 24	Gross Volume
Figures 24 through 30	Net Volume
Figures 31 through 36	Basal Area Mortality
Figures 37 through 42	Volume Mortality
Figures 43 through 47	East Response Variable for the 1980 Installations

The Relationships Between Four-year Gross Basal Area Increment and Initial Basal Area by Geographic Region

- Figure 1 Central Idaho
- Figure 2 Montana
- Figure 3 Northern Idaho
- Figure 4 Northeast Oregon
- Figure 5 Central Washington
- Figure 6 Northeast Washington

REGION-CENTRAL IDAHO
65

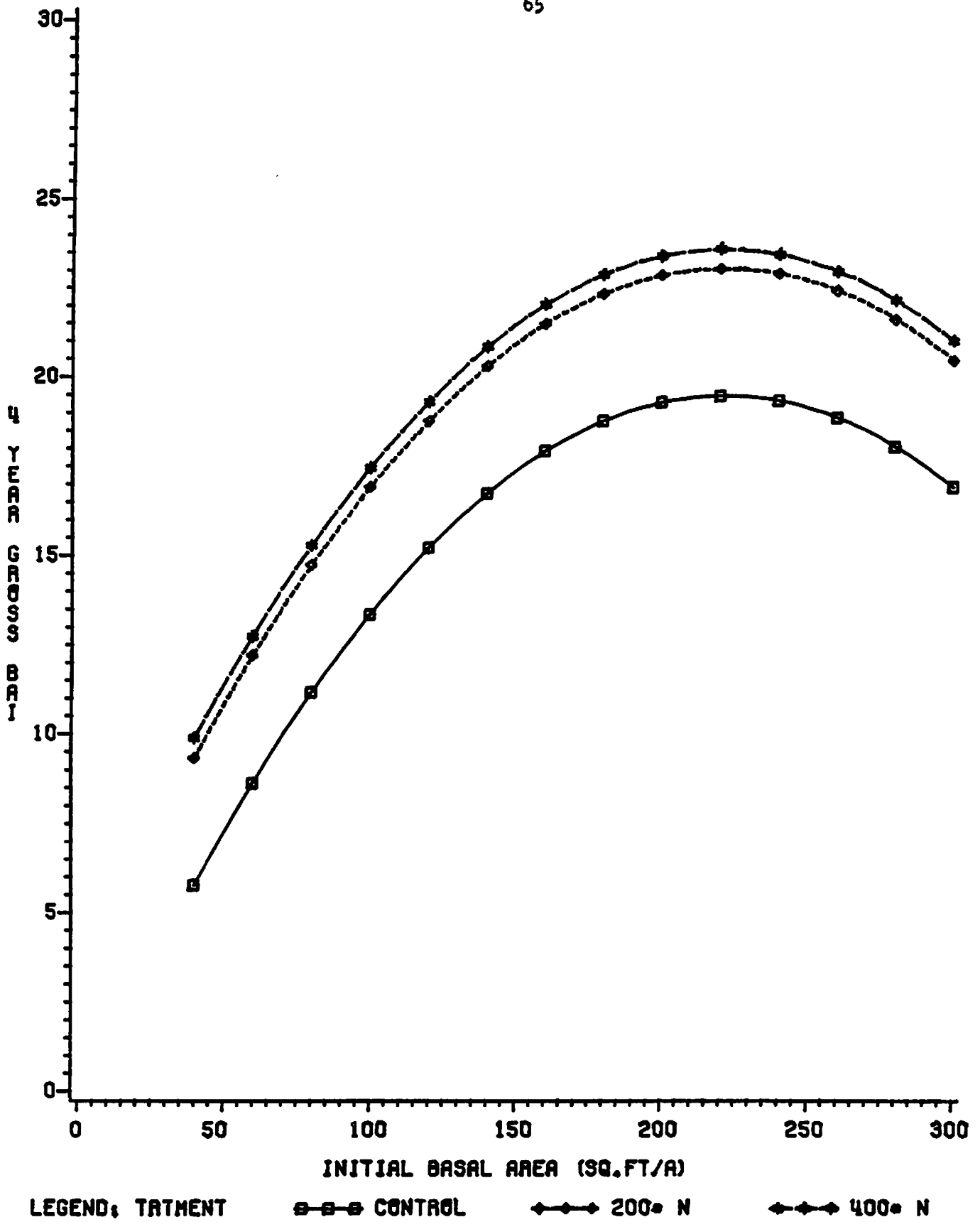


Figure 1

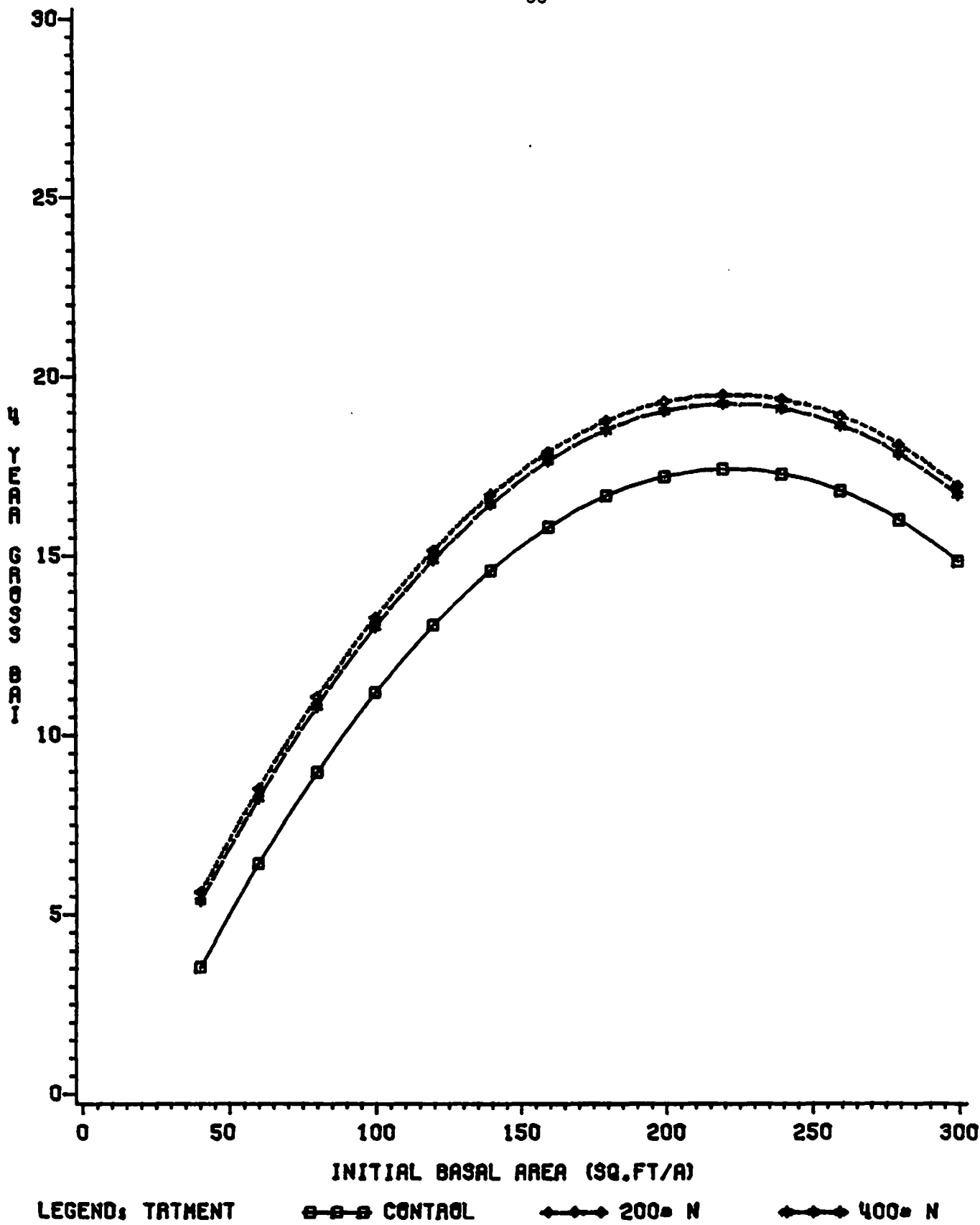


Figure 2

REGION-NORTHERN IDAHO

67

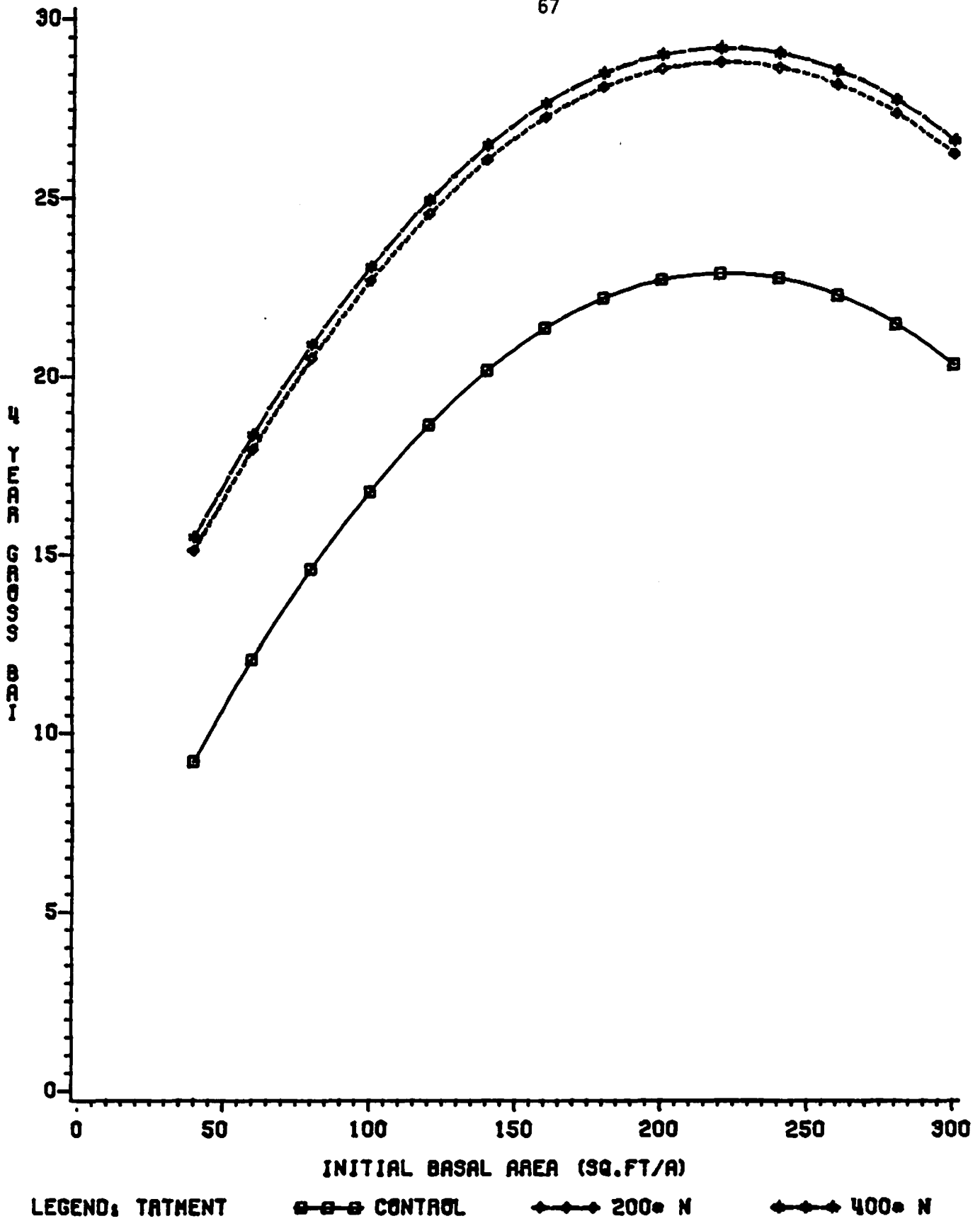


Figure 3

REGION-NE OREGON

6⁰

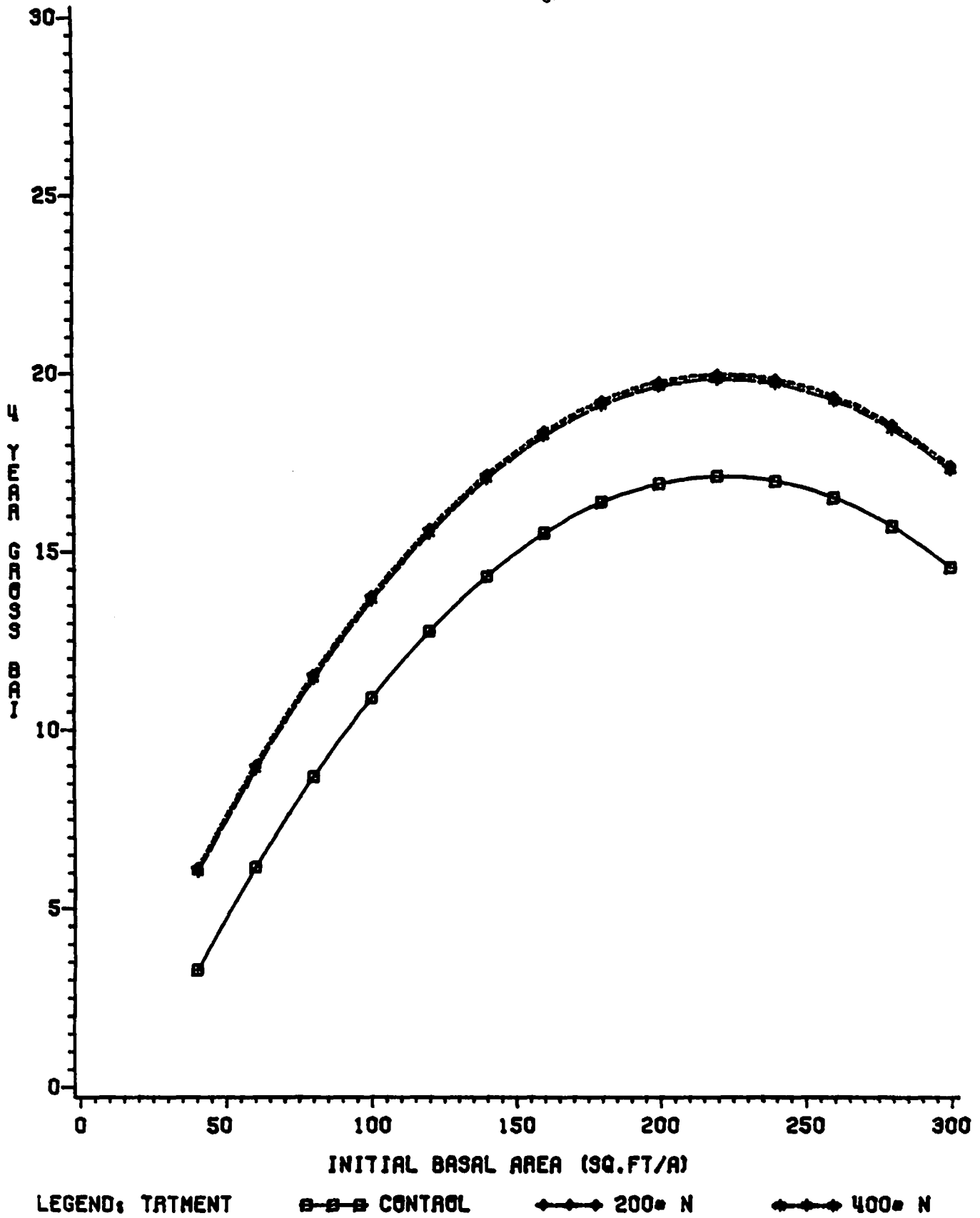


Figure 4

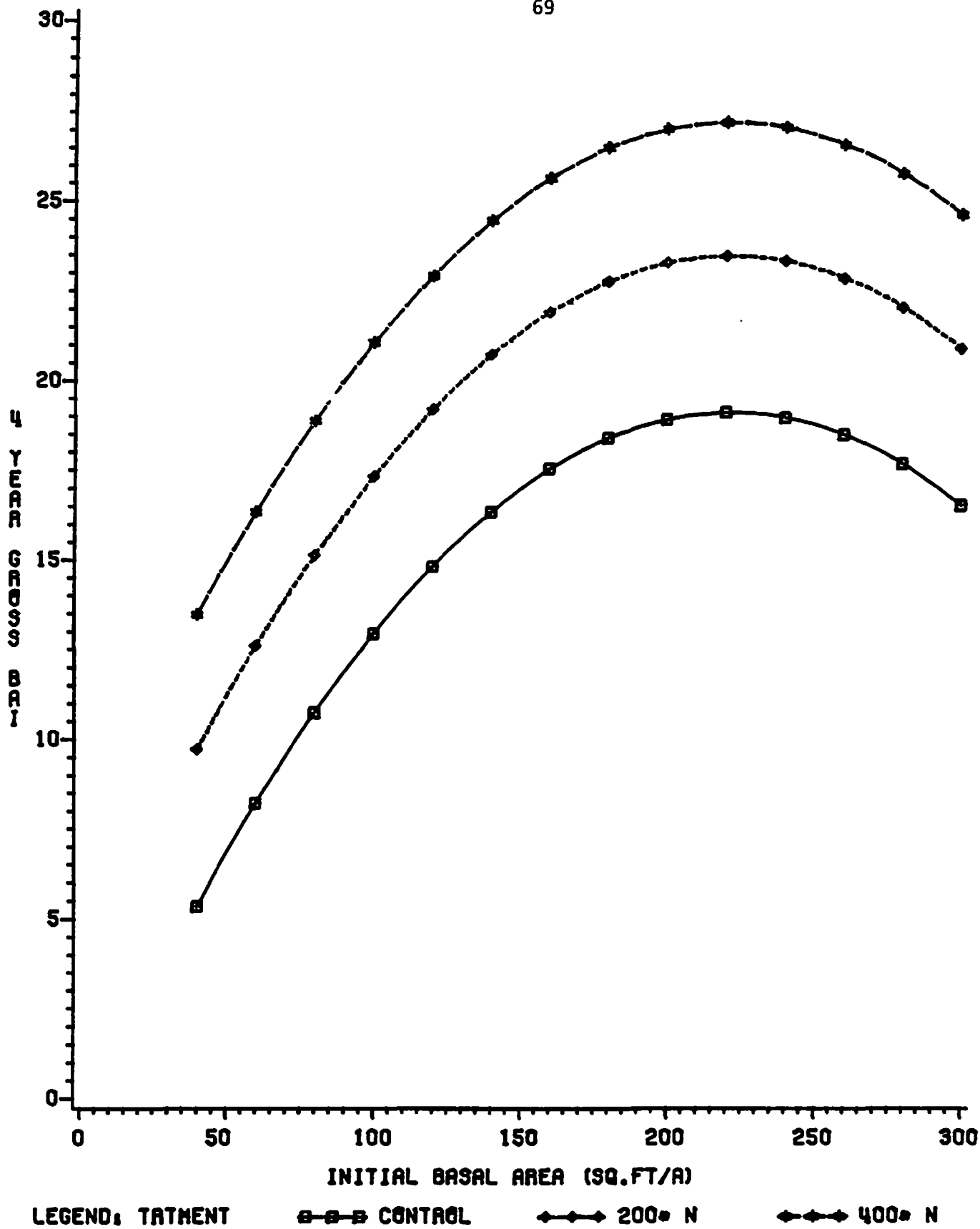


Figure 5

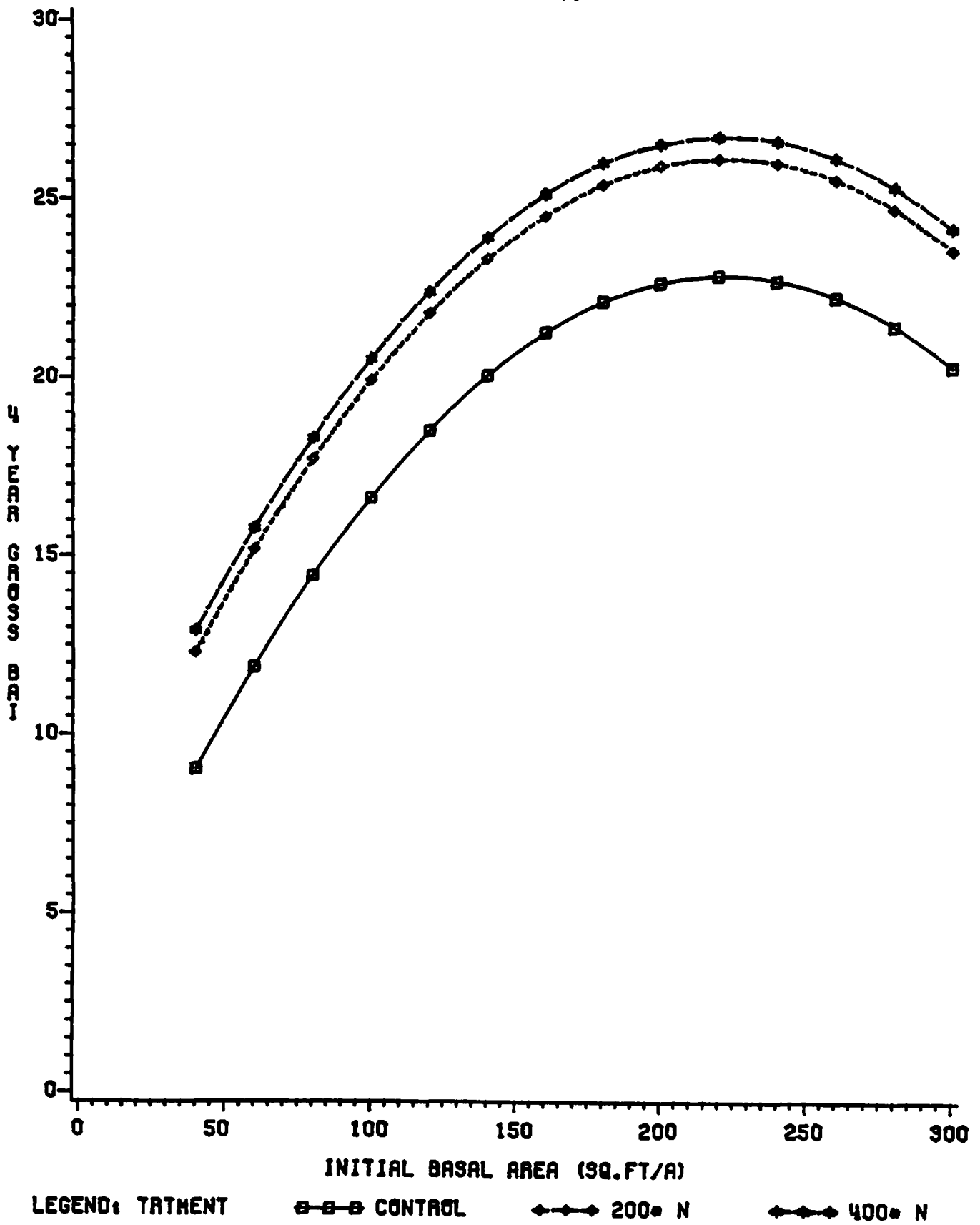


Figure 6

The Relationships Between Four-year Net Basal Area Increment and Initial Basal Area by Geographic Region

- | | |
|-----------|----------------------|
| Figure 7 | Central Idaho |
| Figure 8 | Montana |
| Figure 9 | Northern Idaho |
| Figure 10 | Northeast Oregon |
| Figure 11 | Central Washington |
| Figure 12 | Northeast Washington |

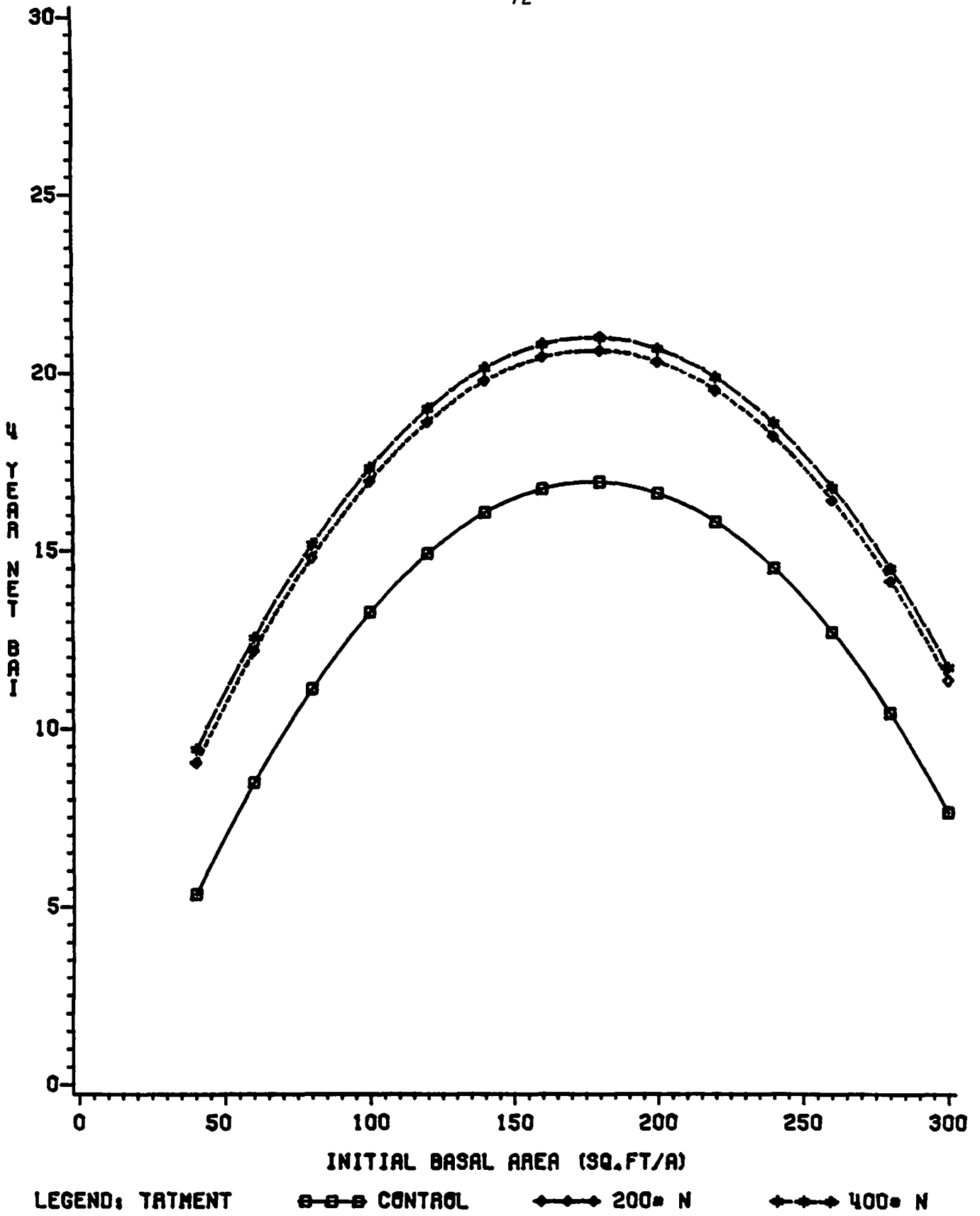


Figure 7

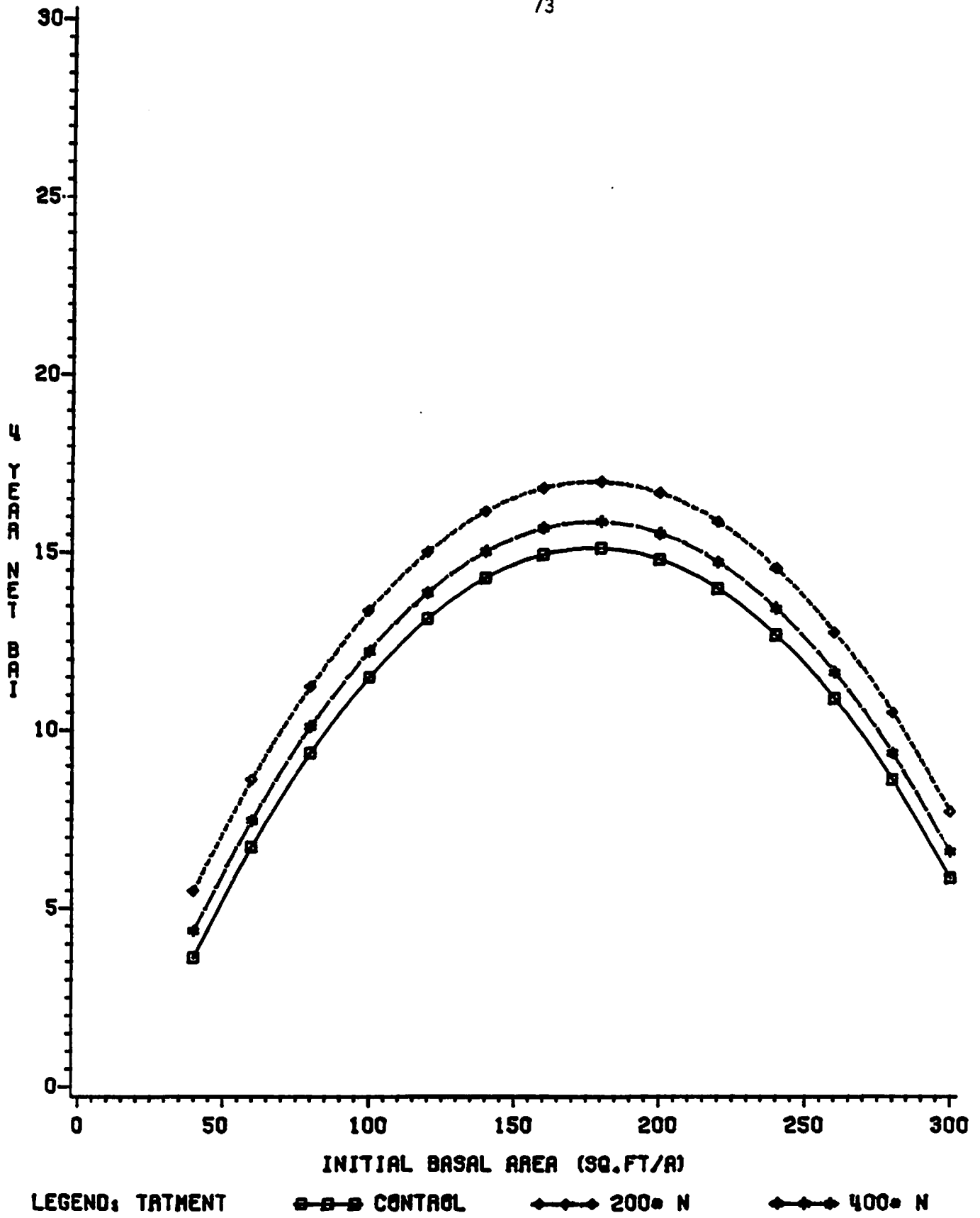


Figure 8

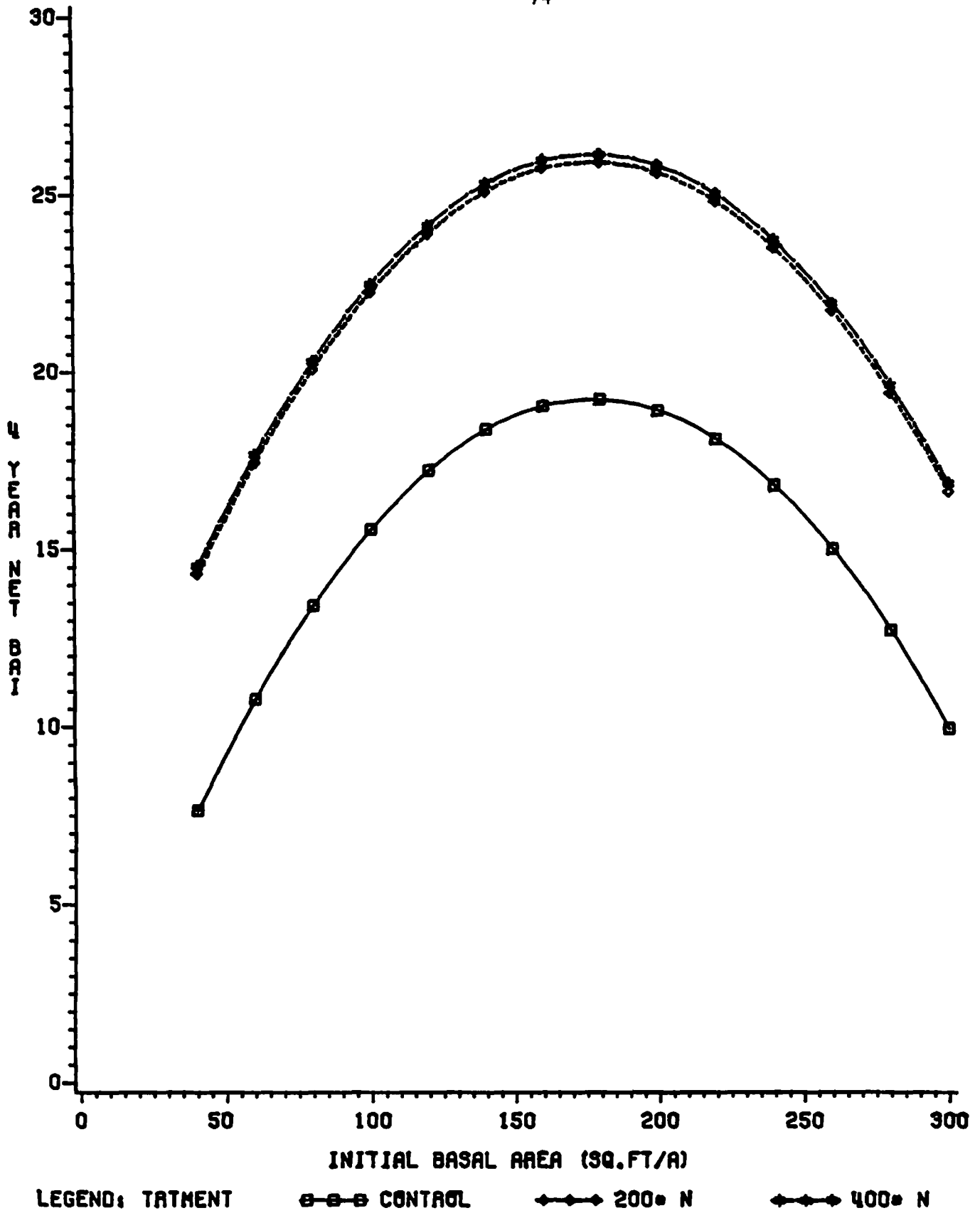


Figure 9

REGION=NE OREGON

75

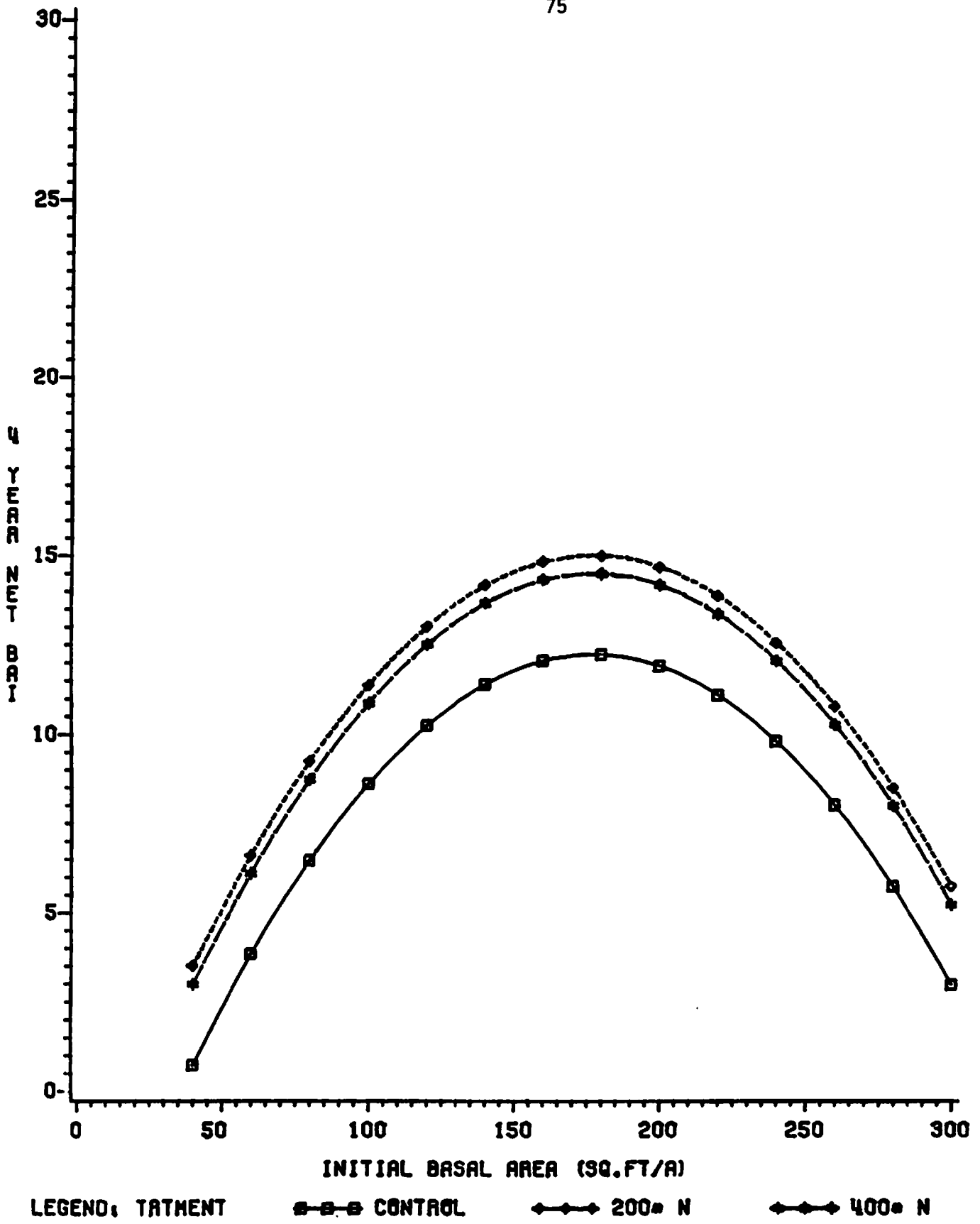


Figure 10

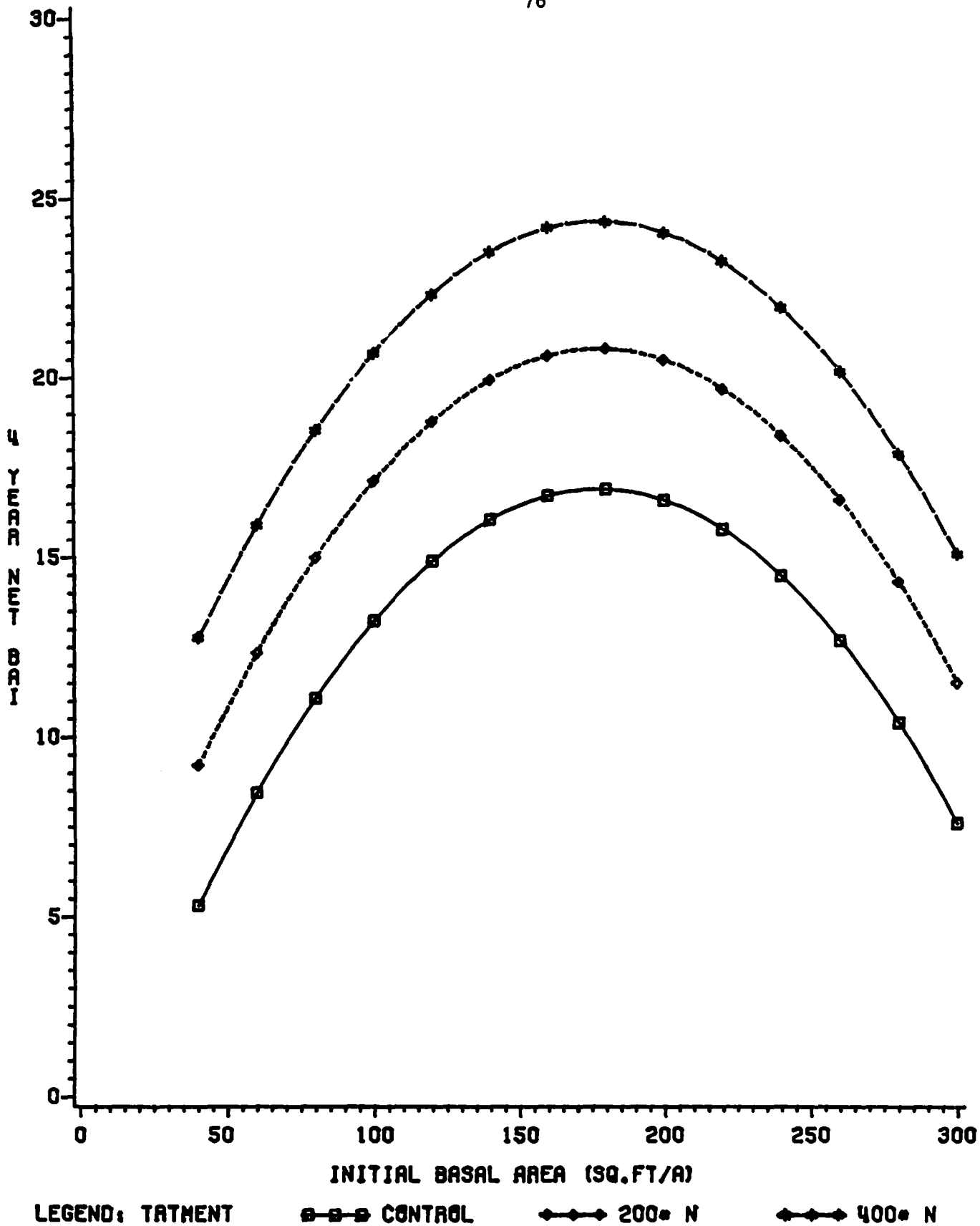


Figure 11

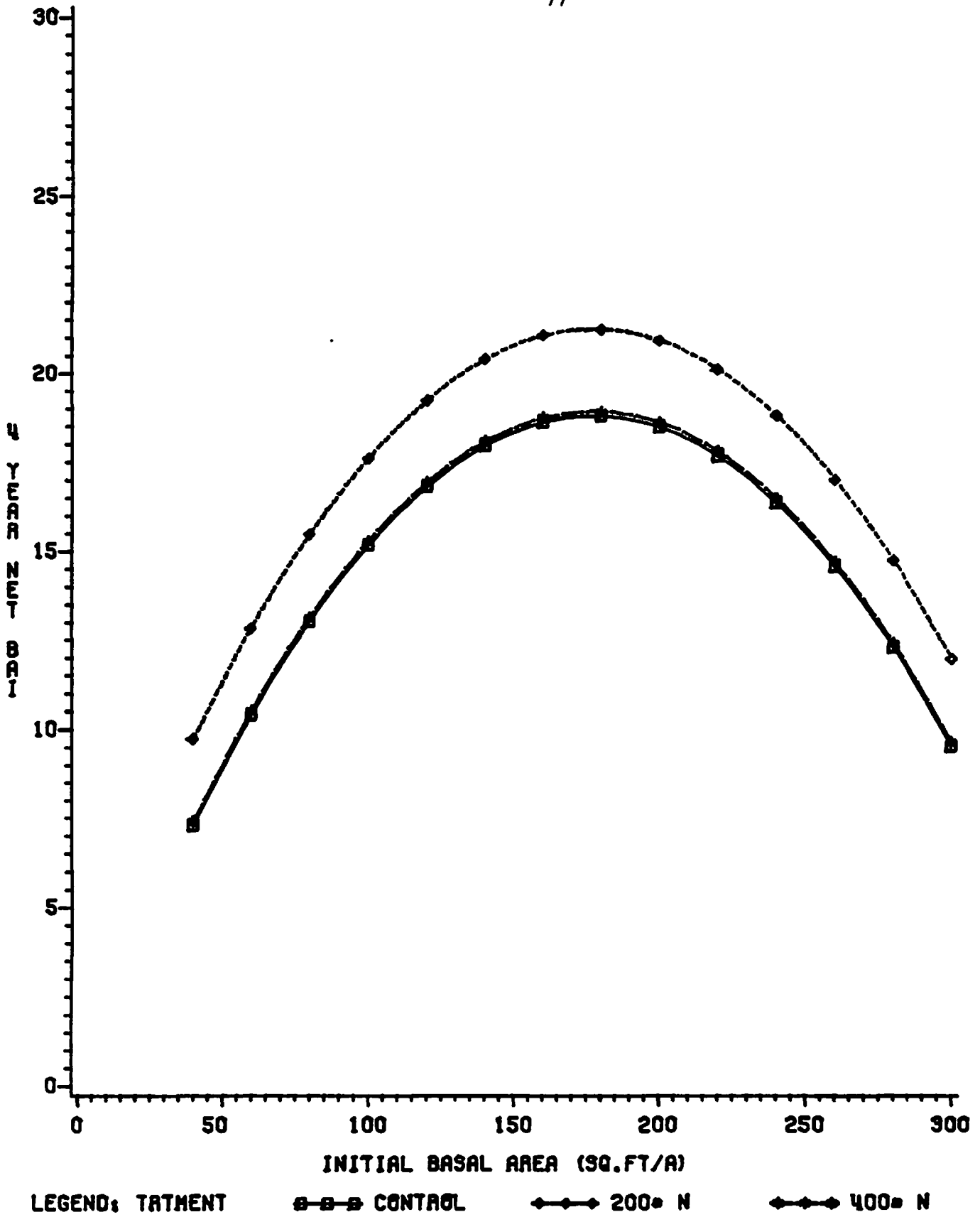


Figure 12

The Relationships Between Four-year Height Increment and Initial Basal Area
by Geographic Region

- Figure 13 Central Idaho
- Figure 14 Montana
- Figure 15 Northern Idaho
- Figure 16 Northeast Oregon
- Figure 17 Central Washington
- Figure 18 Northeast Washington

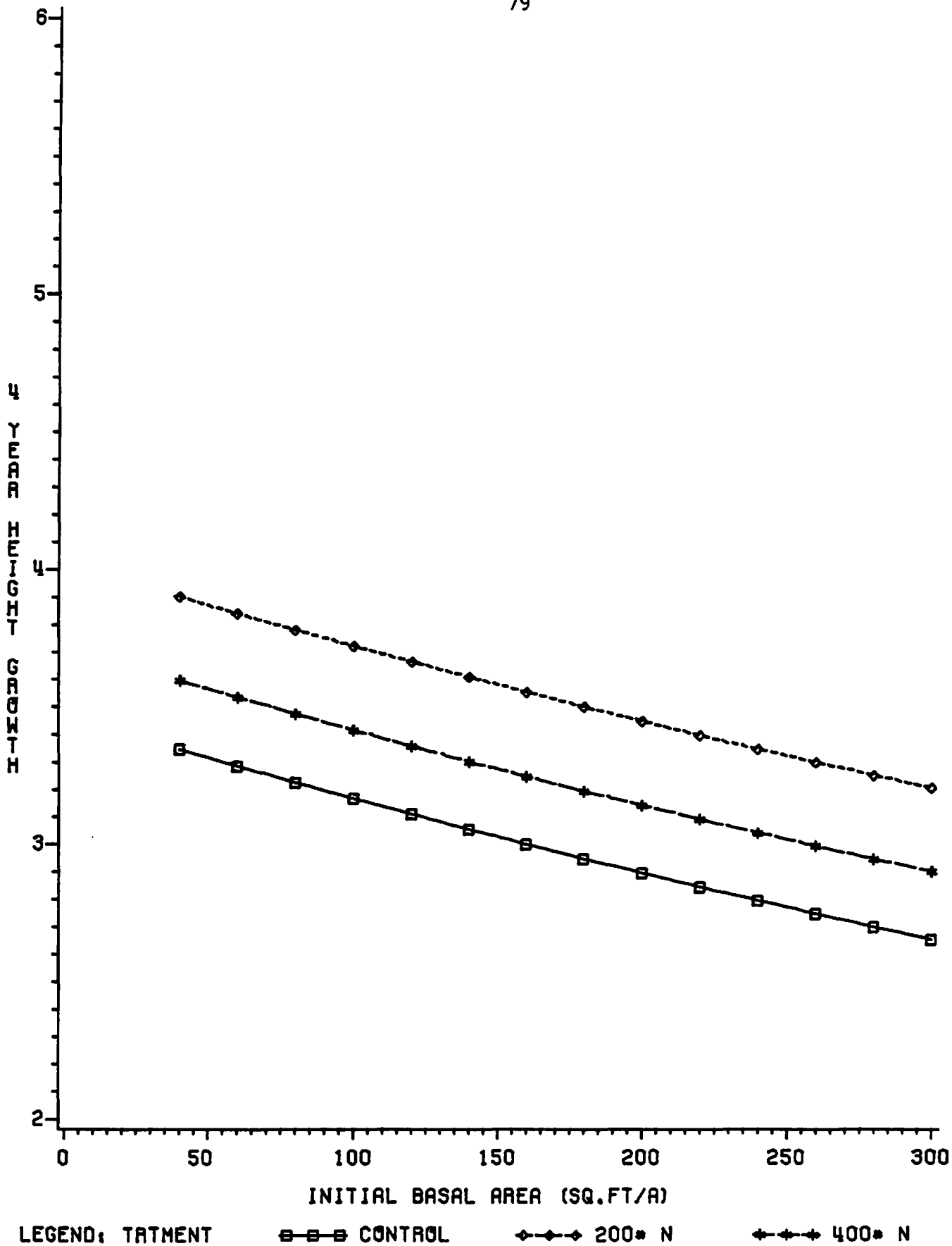


Figure 13

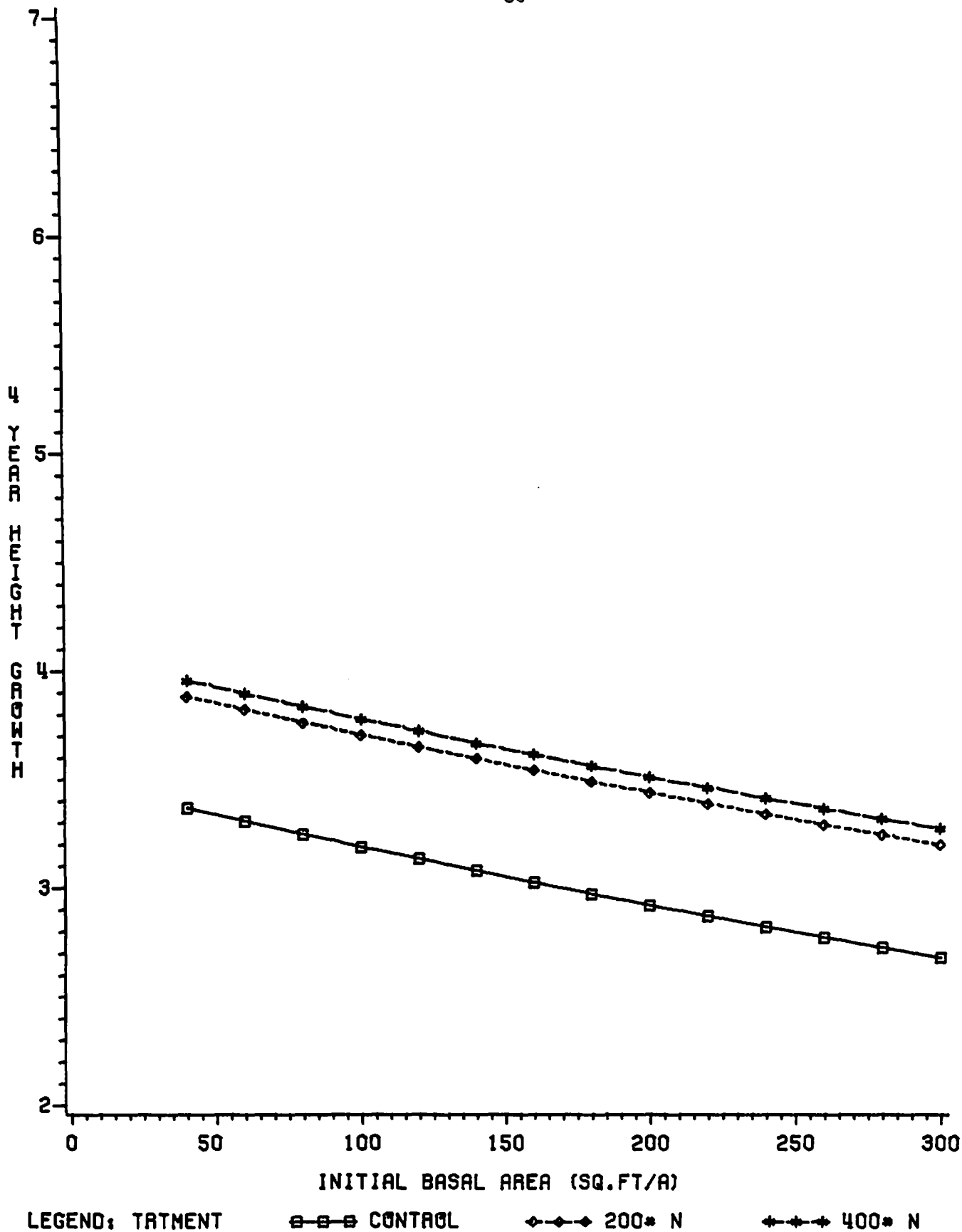


Figure 14

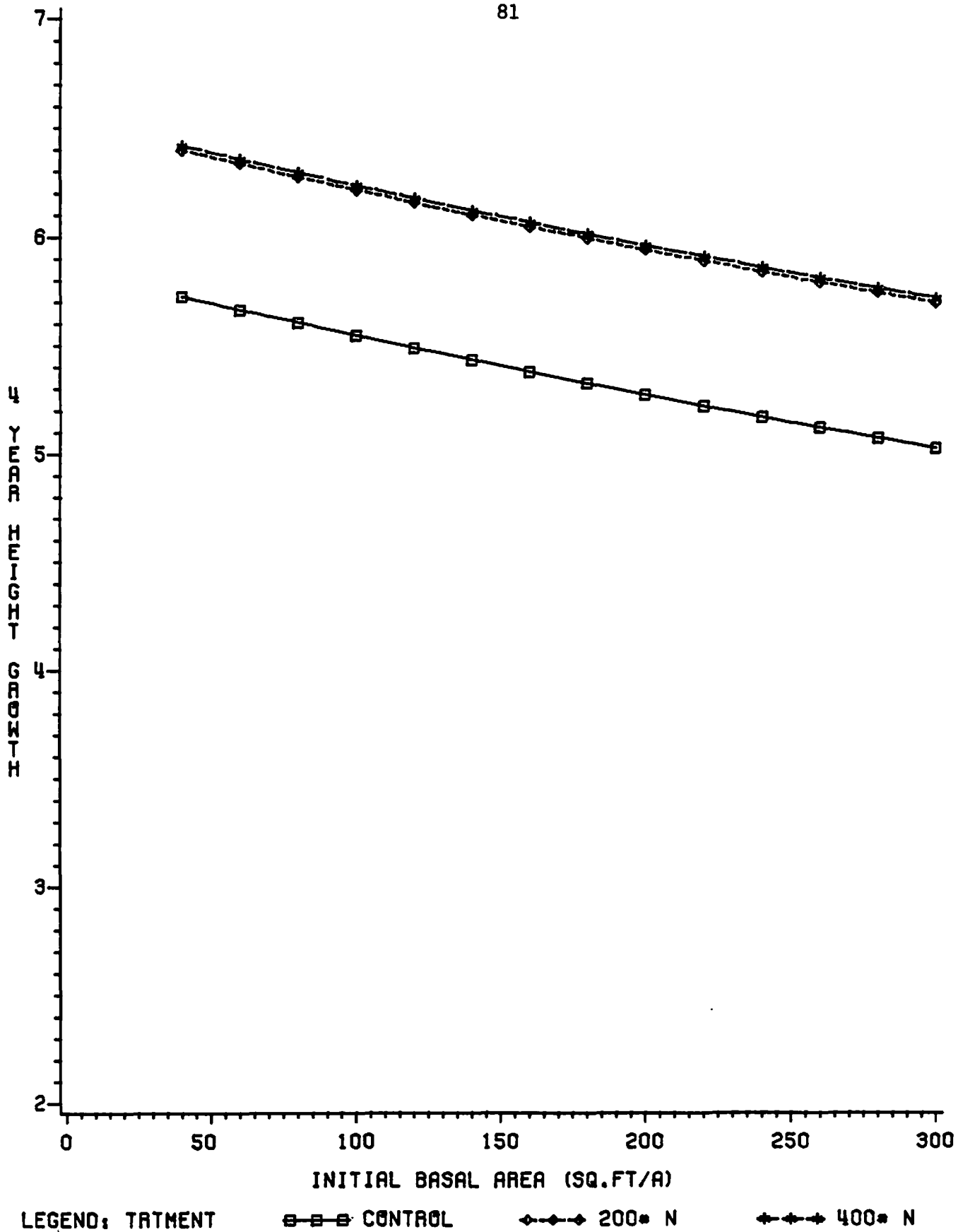


Figure 15

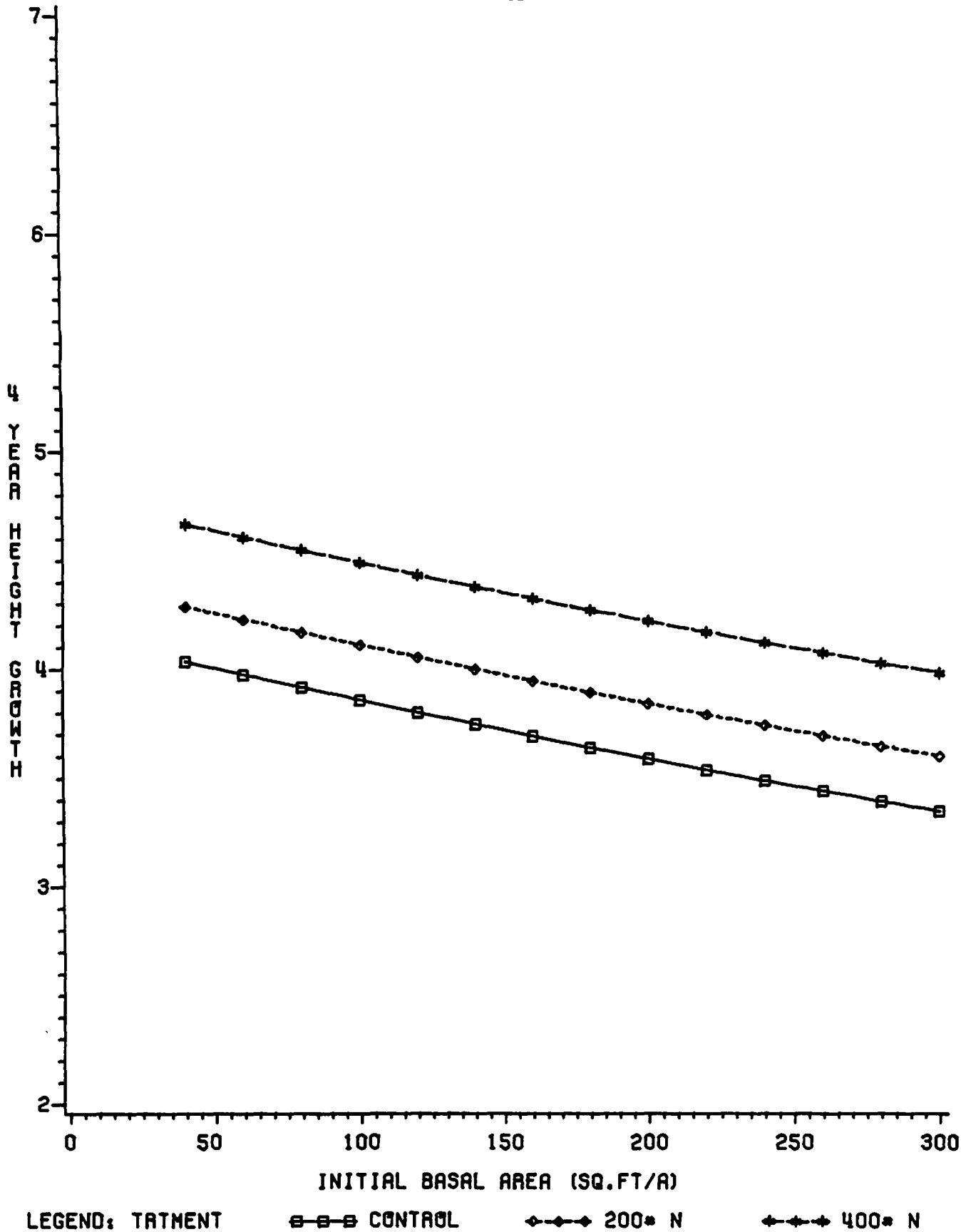


Figure 16

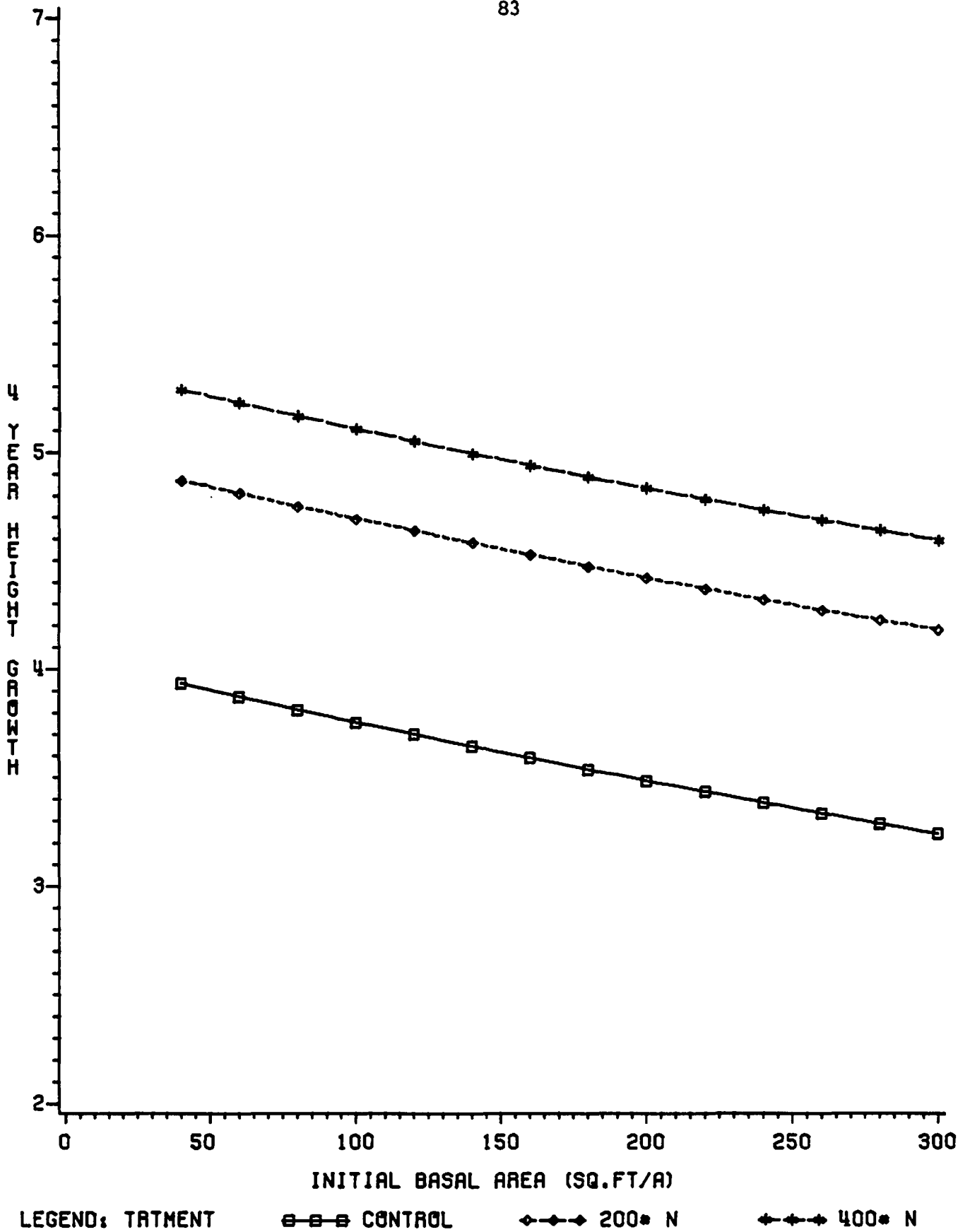


Figure 17

REGION-NE WASHINGTON
84

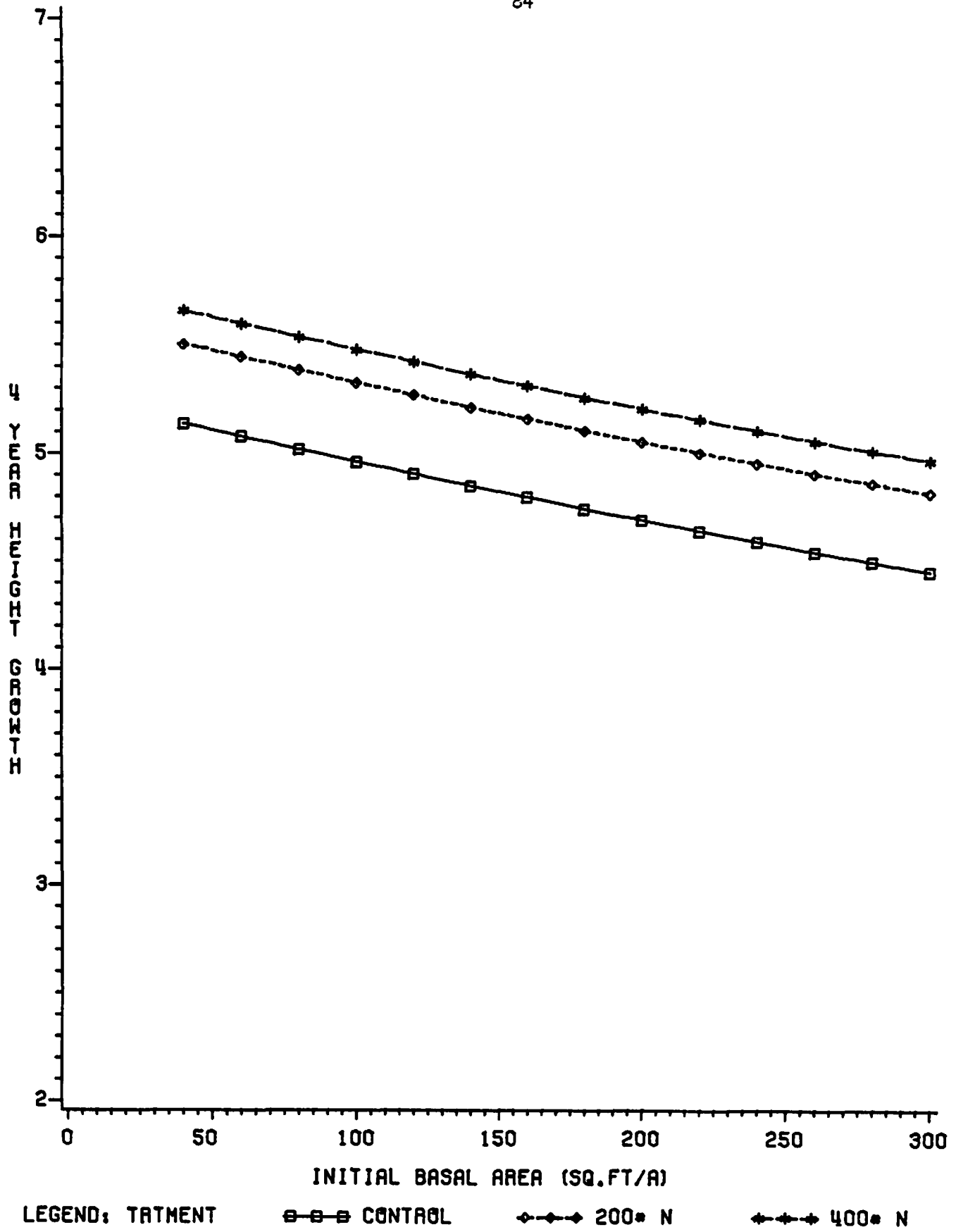


Figure 18

The Relationships Between Four-year Gross Volume Increment and Initial Basal Area by Geographic Region

- Figure 19 Central Idaho
- Figure 20 Montana
- Figure 21 Northern Idaho
- Figure 22 Northeast Oregon
- Figure 23 Central Washington
- Figure 24 Northeast Washington

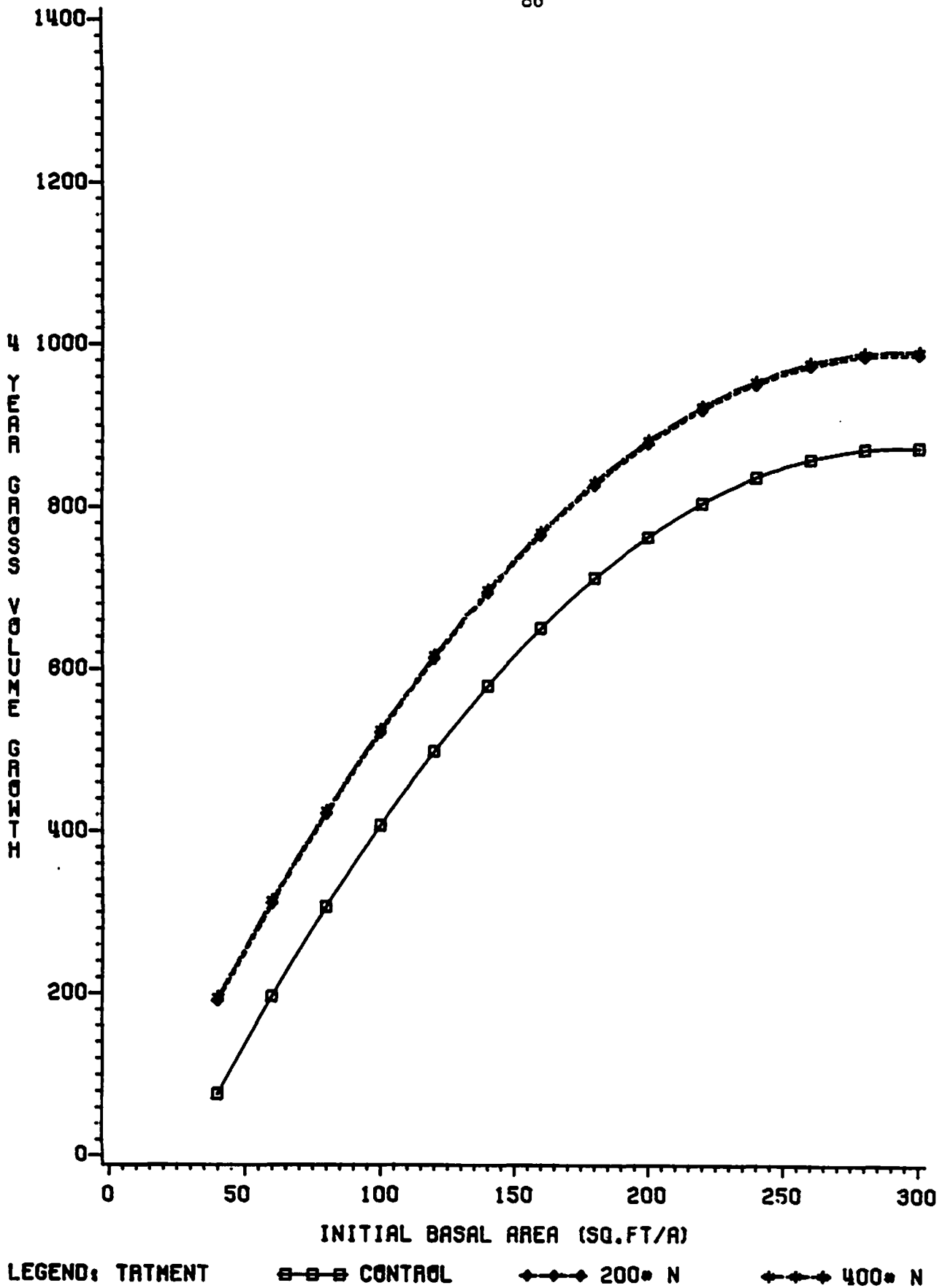


Figure 19

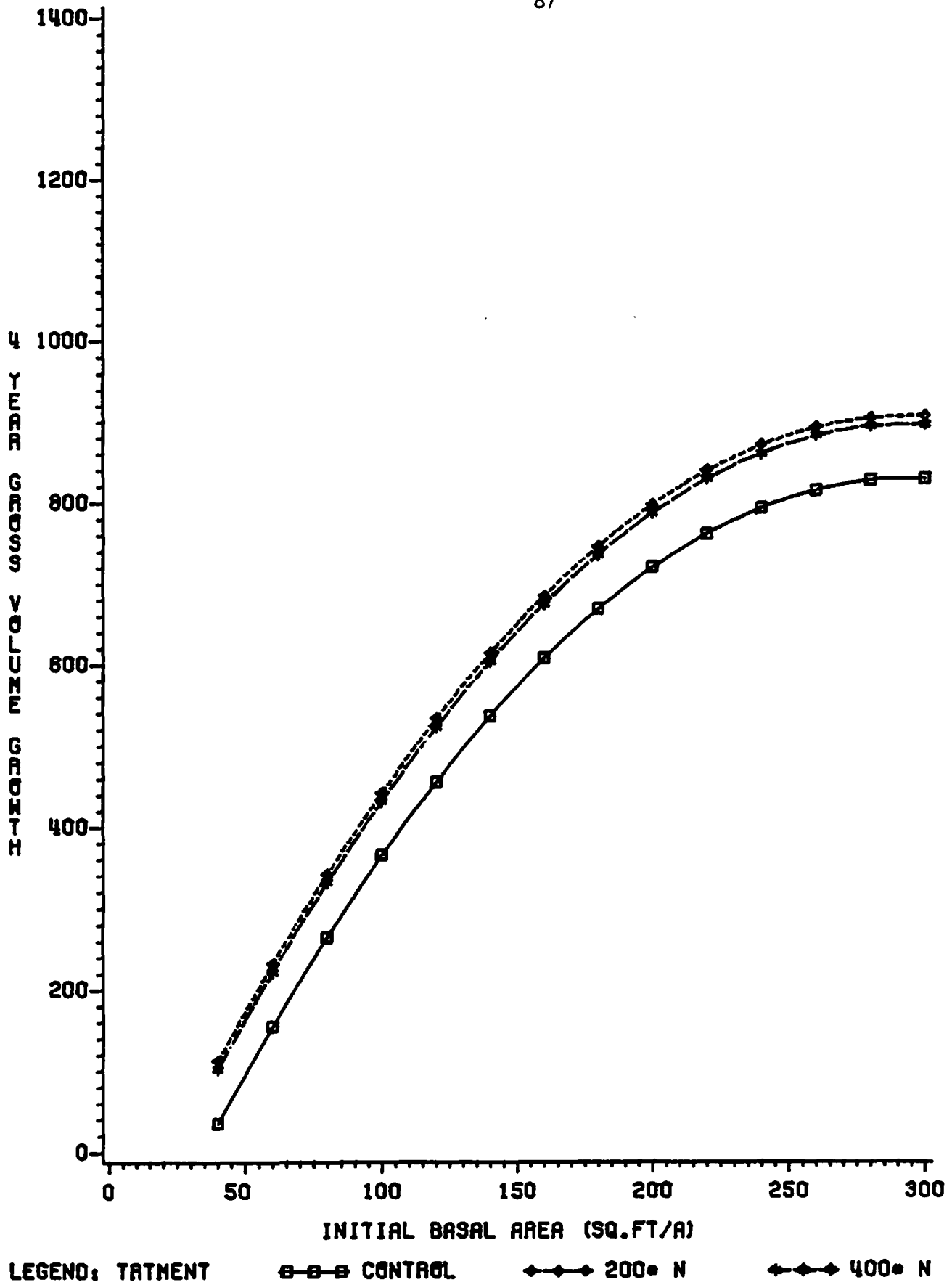


Figure 20

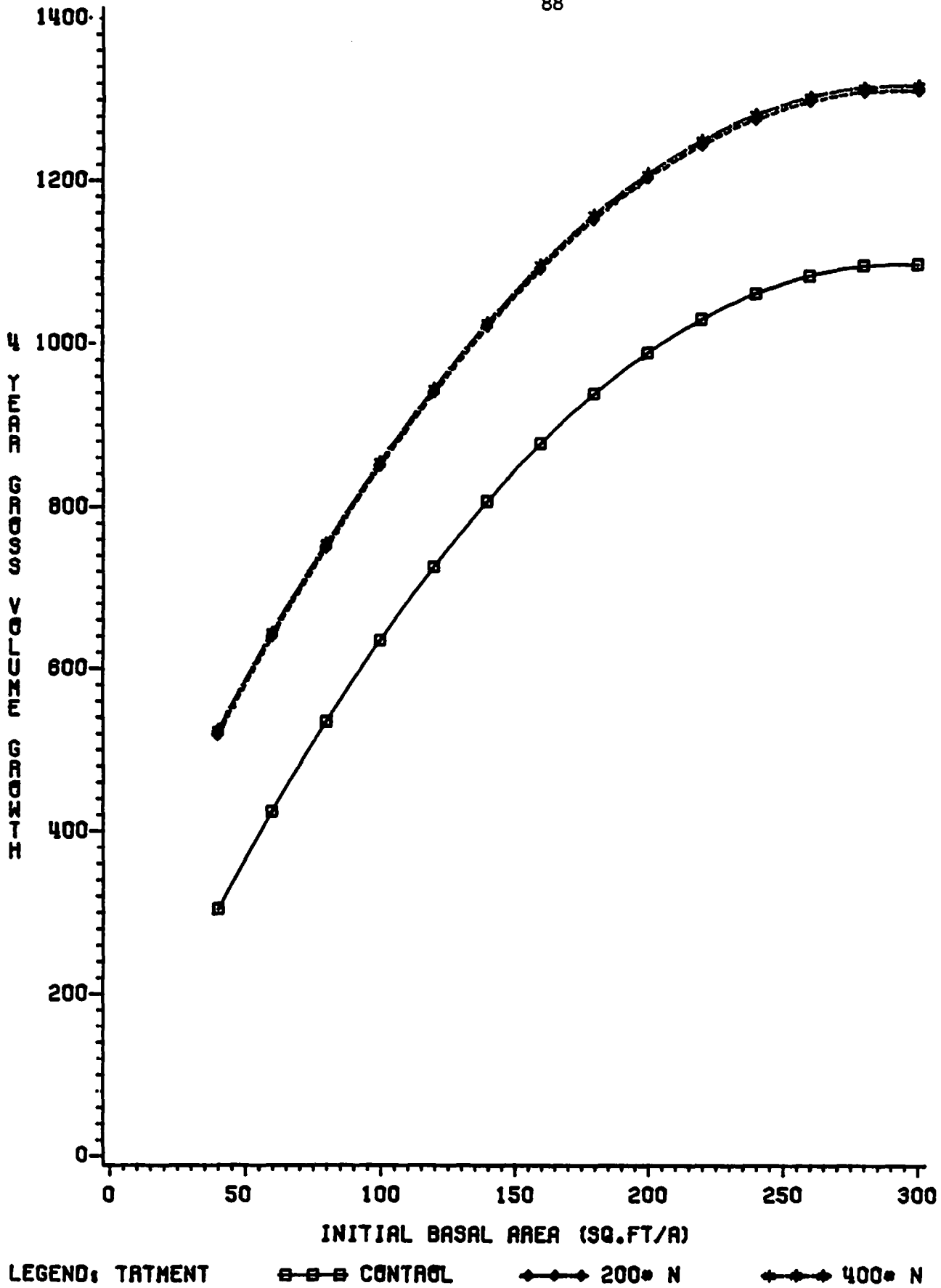


Figure 21

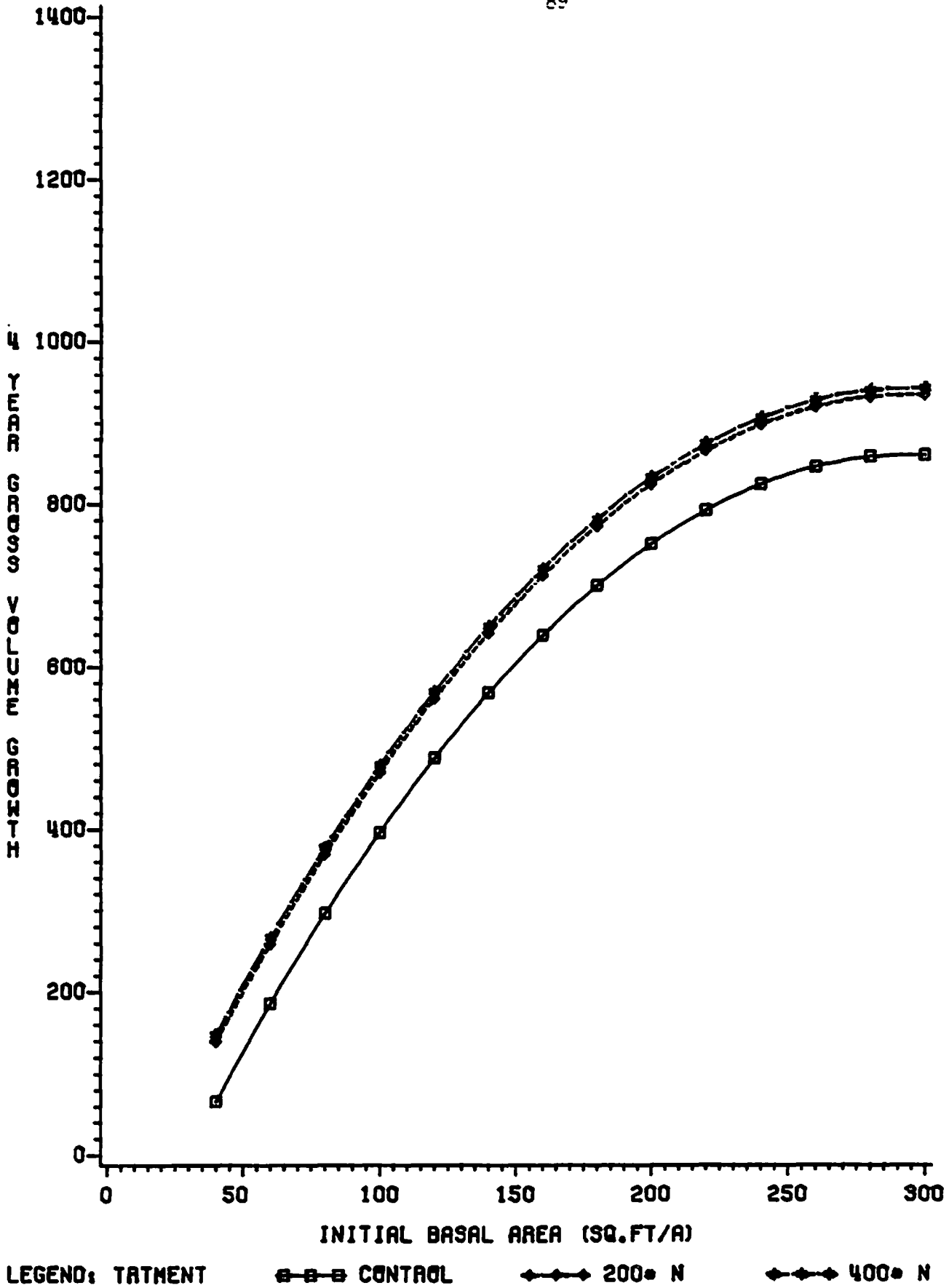


Figure 22

REGION=CEN WASHINGTON
90

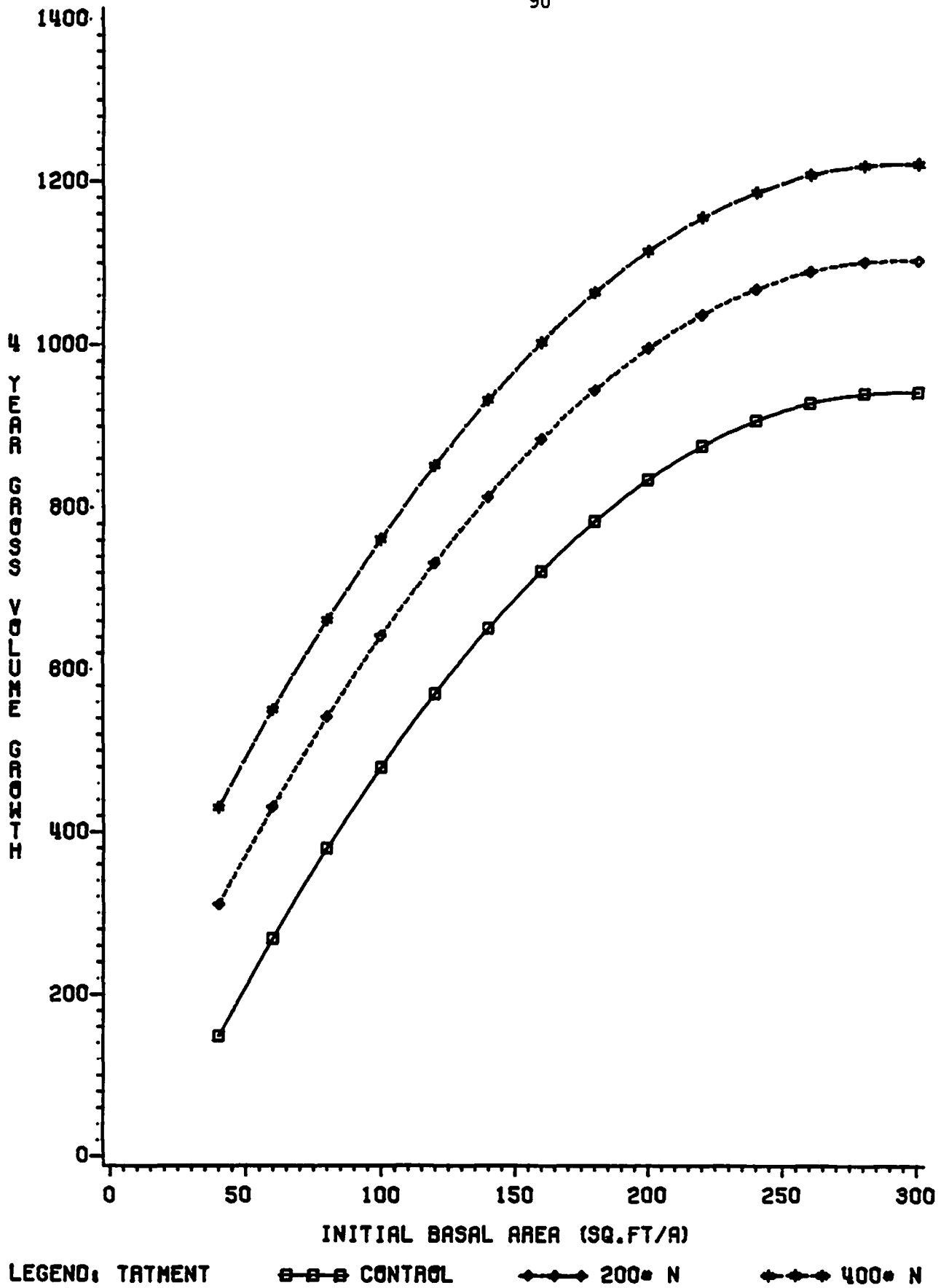


Figure 23

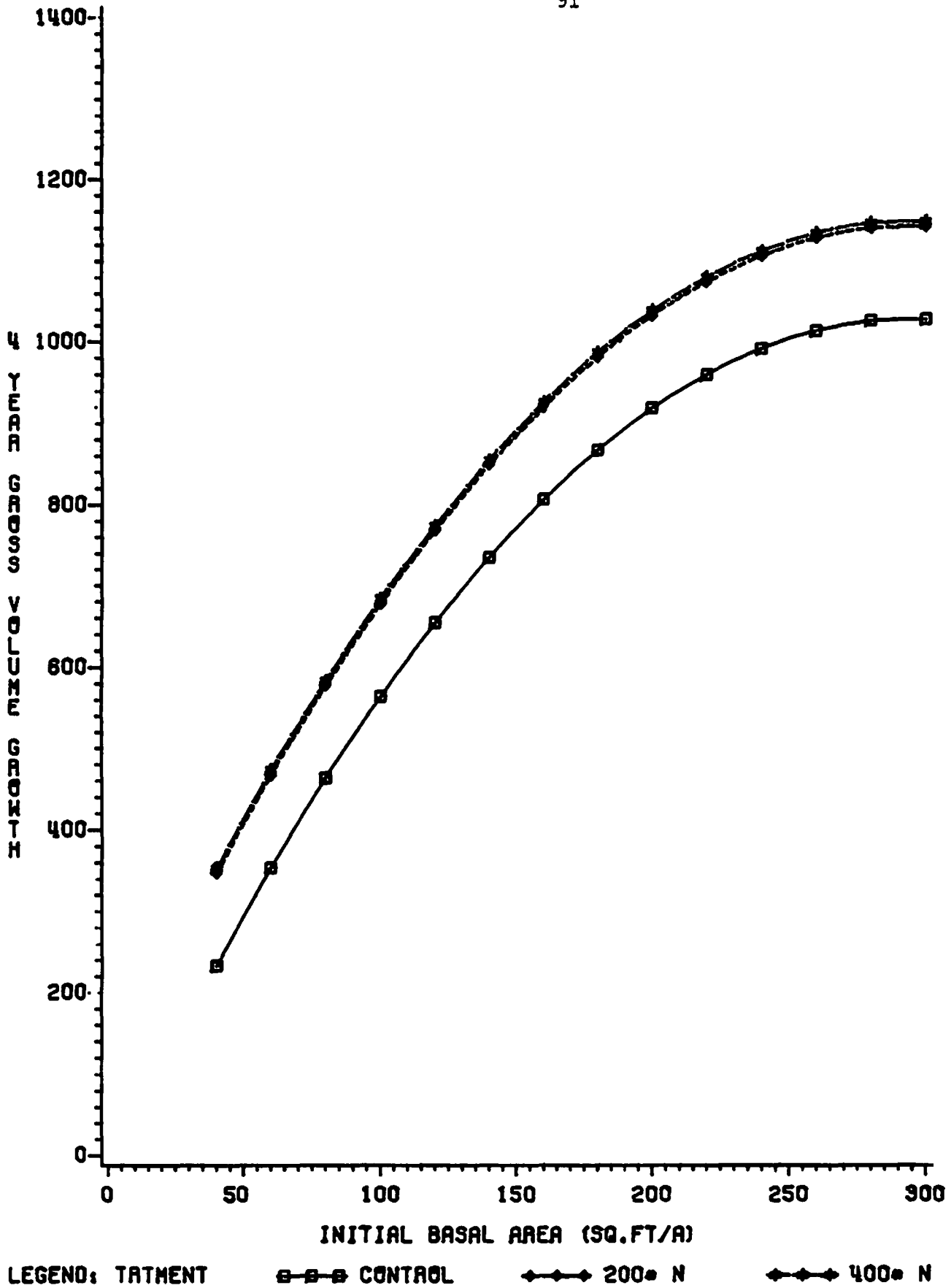


Figure 24

The Relationships Between Four-year Net Volume Increment and Initial Basal Area by Geographic Region

- Figure 25 Central Idaho
- Figure 26 Montana
- Figure 27 Northern Idaho
- Figure 28 Northeast Oregon
- Figure 29 Central Washington
- Figure 30 Northeast Washington

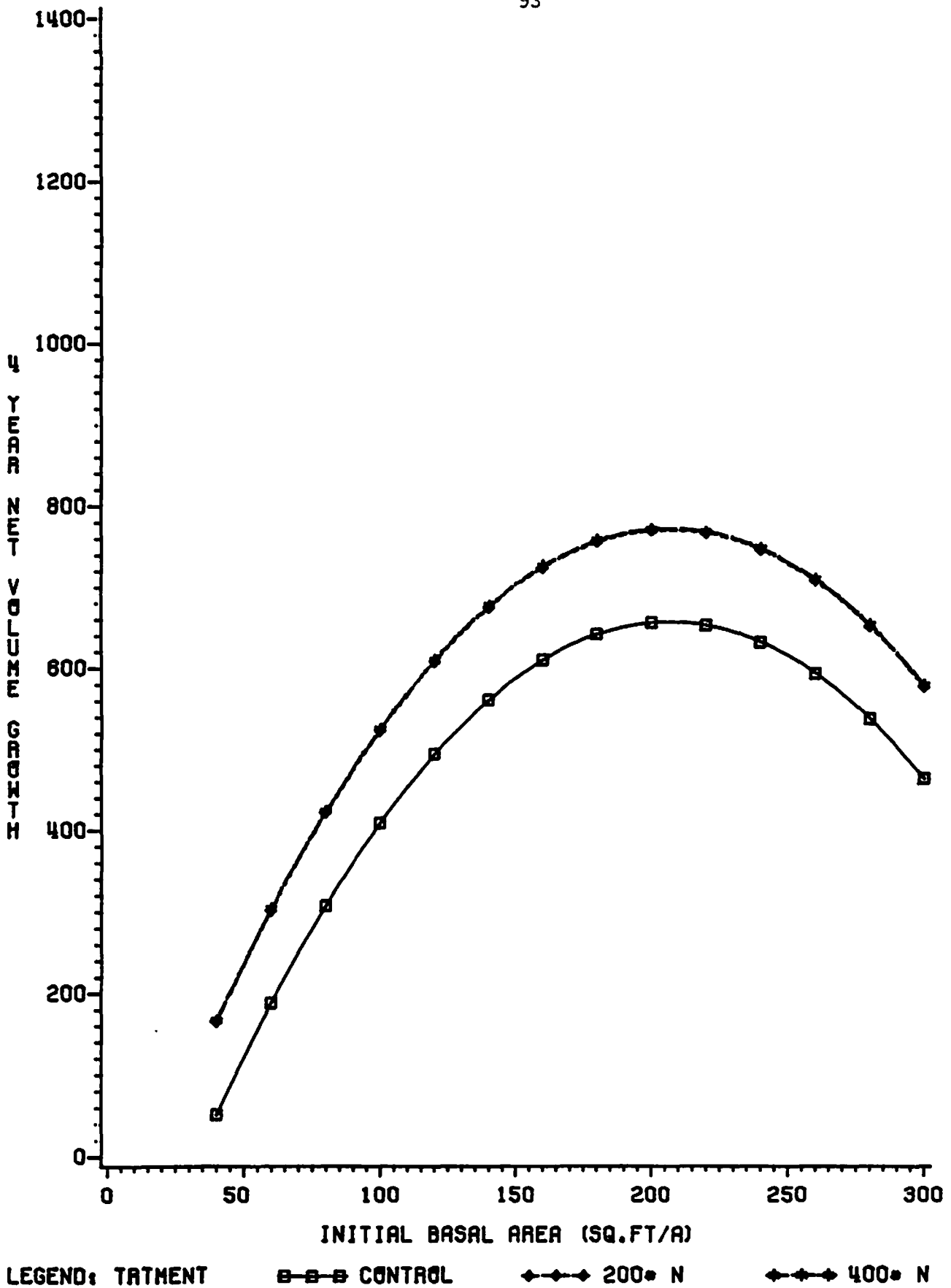


Figure 25

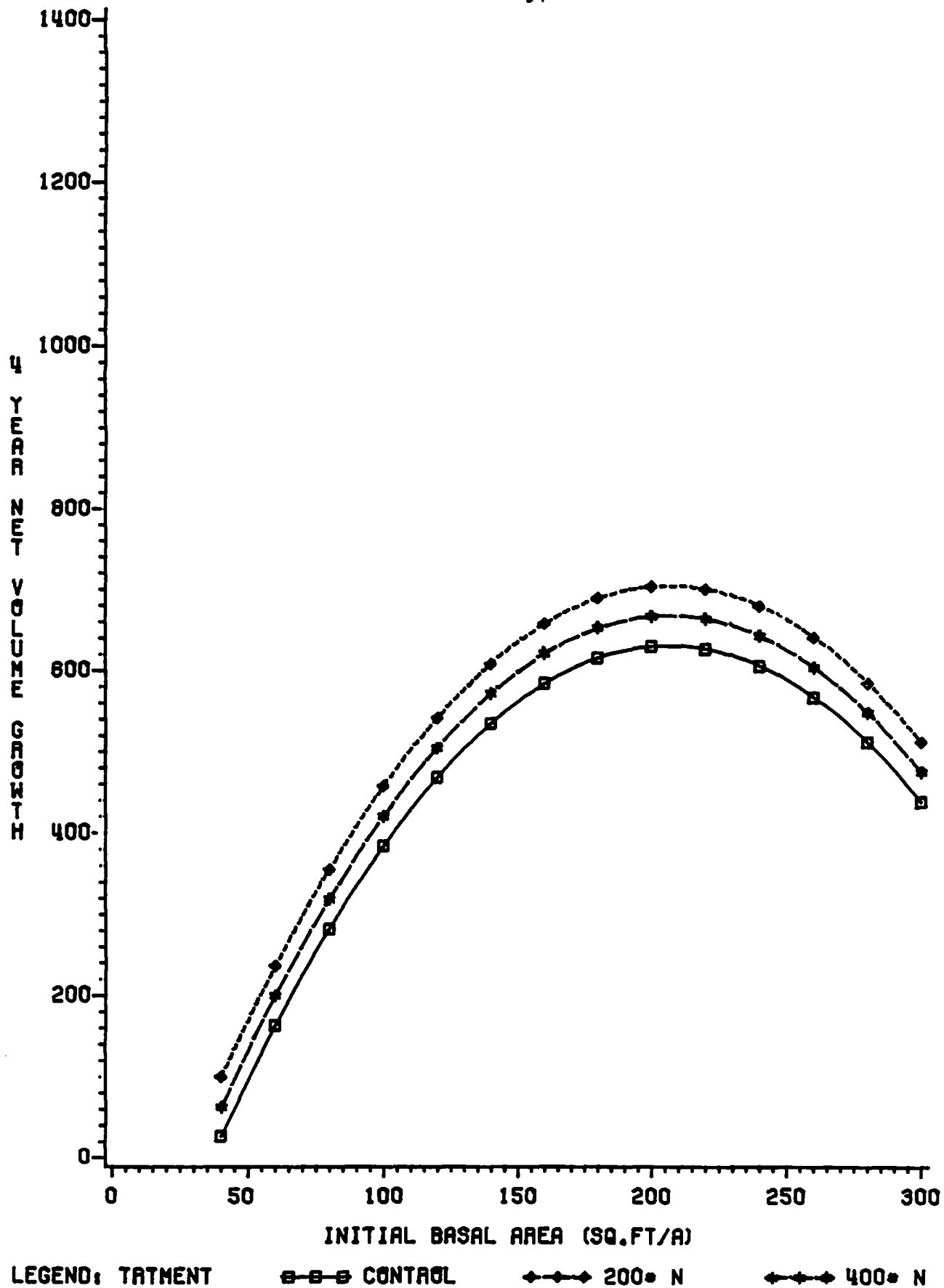


Figure 26

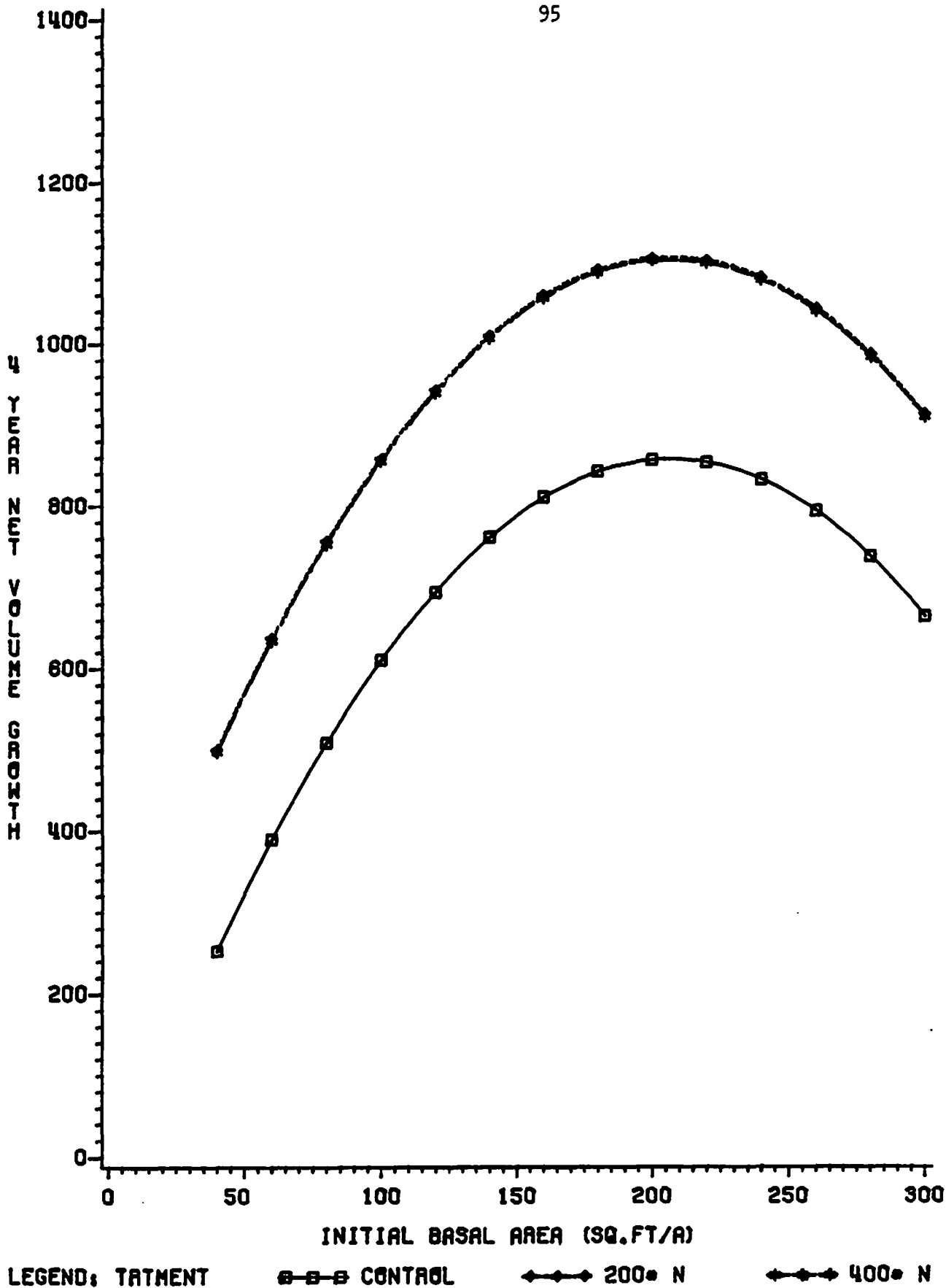


Figure 27

REGION-NE OREGON
96

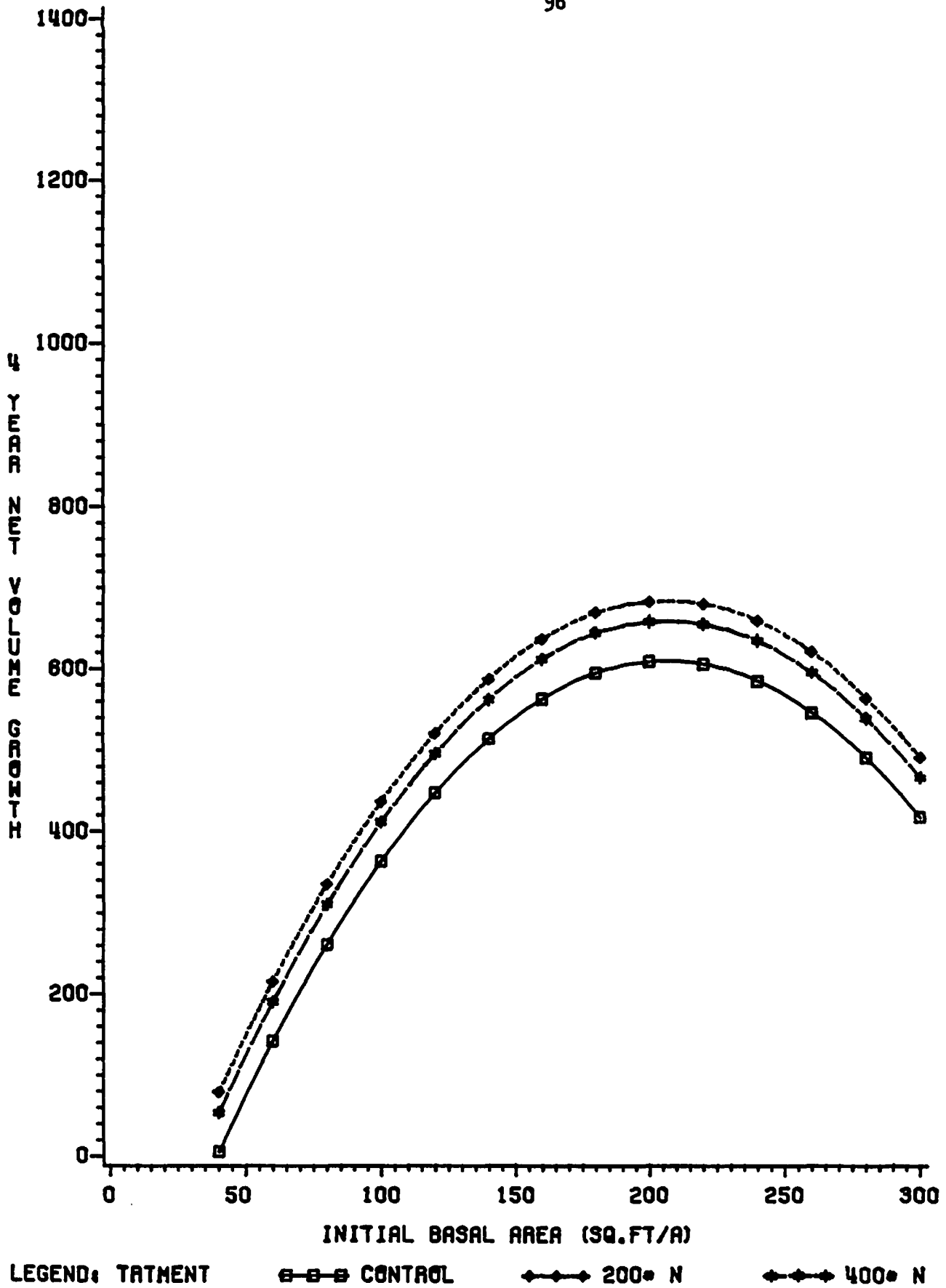


Figure 28

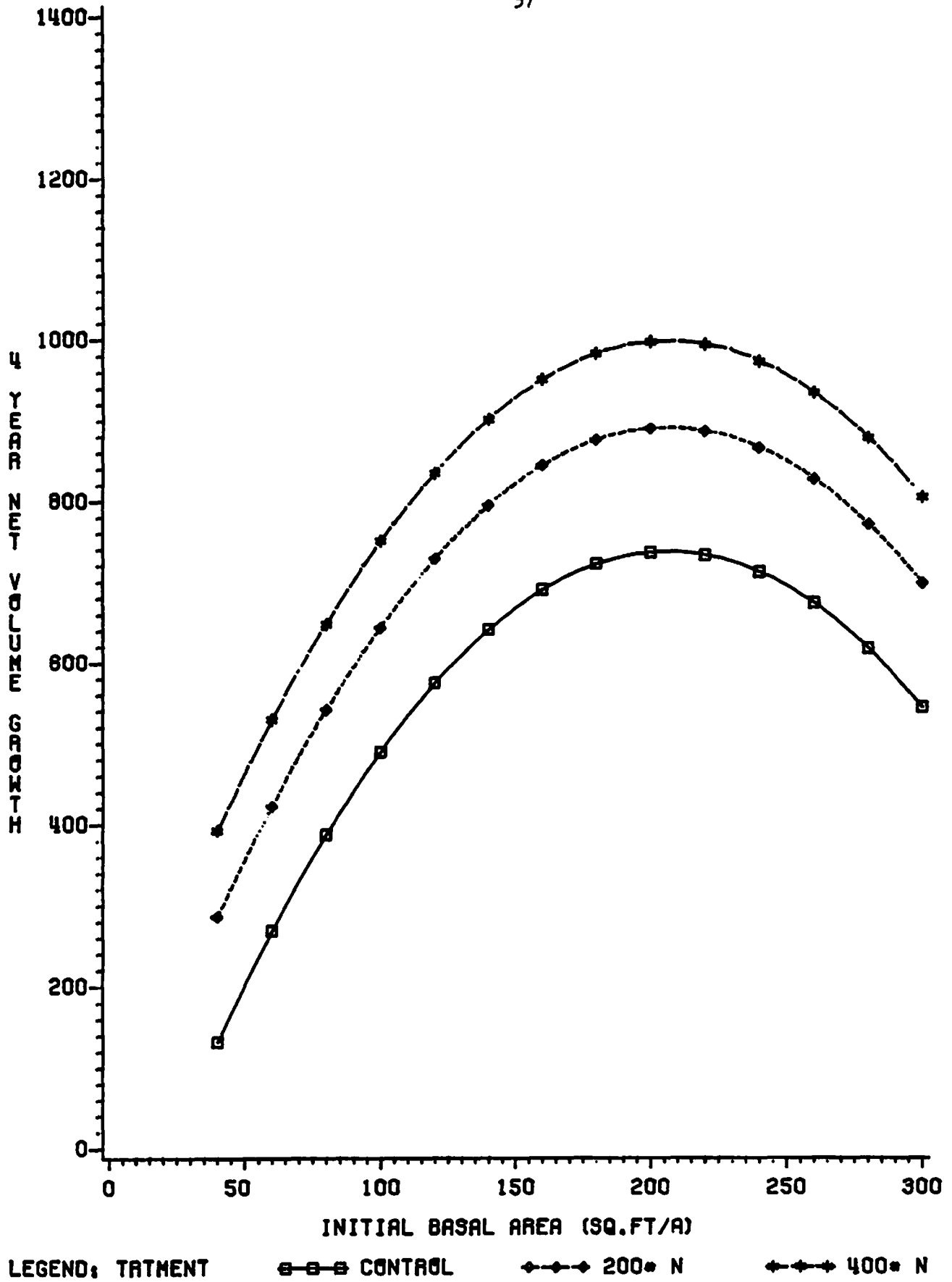


Figure 29

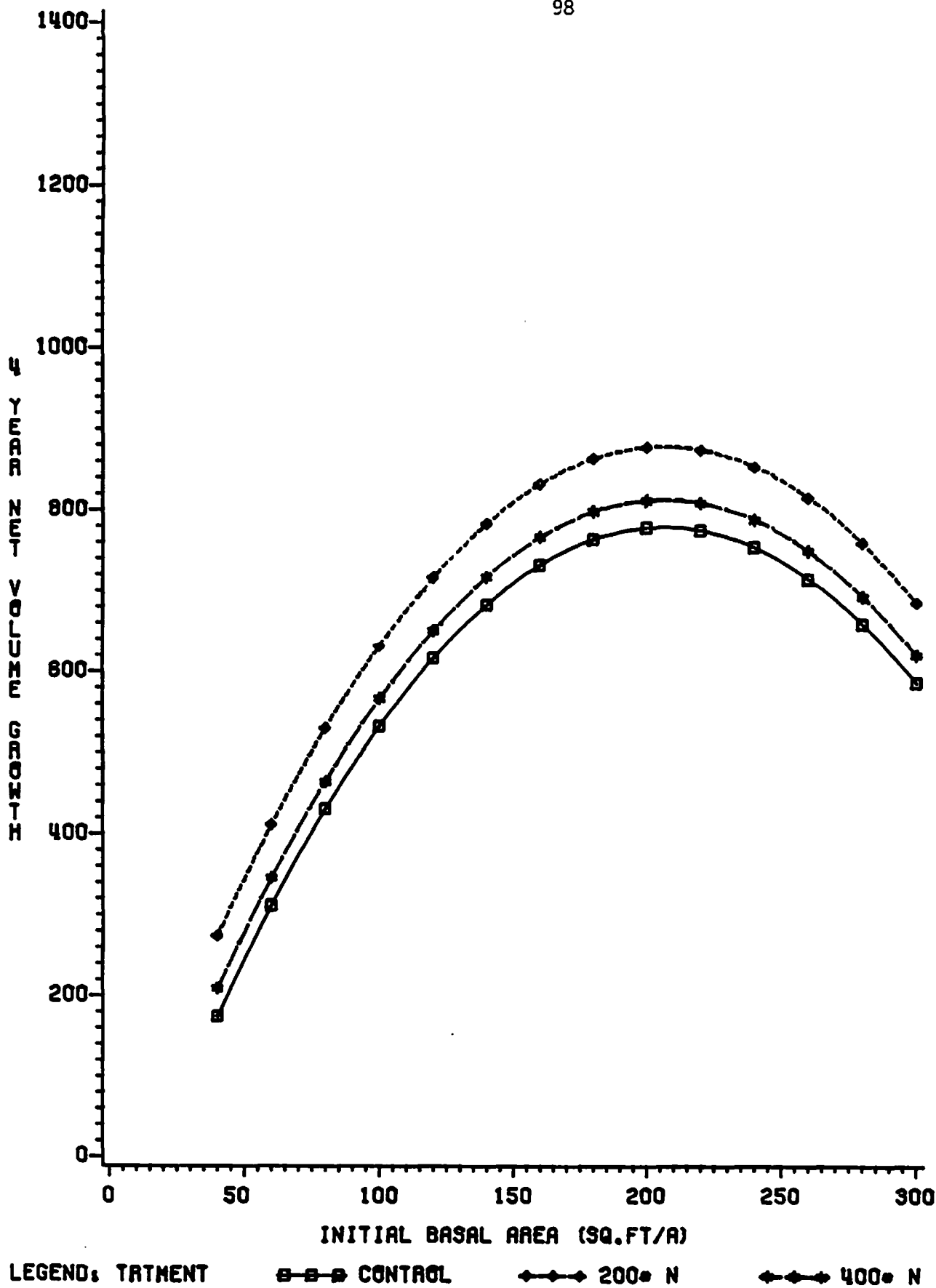


Figure 30

The Relationships Between Four-year Net Basal Area Mortality and Initial Basal Area by Geographic Region

- Figure 31 Central Idaho
- Figure 32 Montana
- Figure 33 Northern Idaho
- Figure 34 Northeast Oregon
- Figure 35 Central Washington
- Figure 36 Northeast Washington

REGION-CENTRAL IDAHO
100

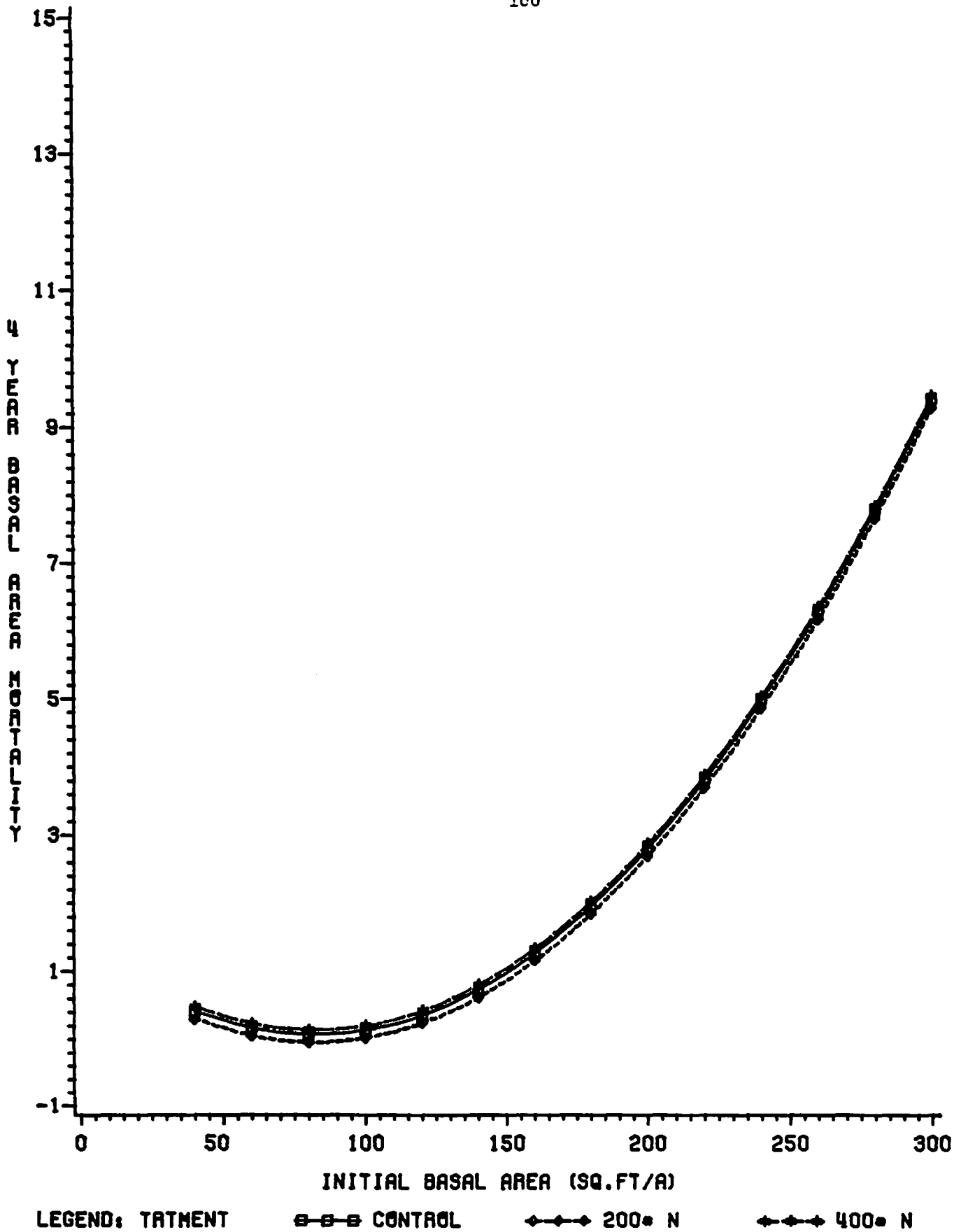


Figure 31

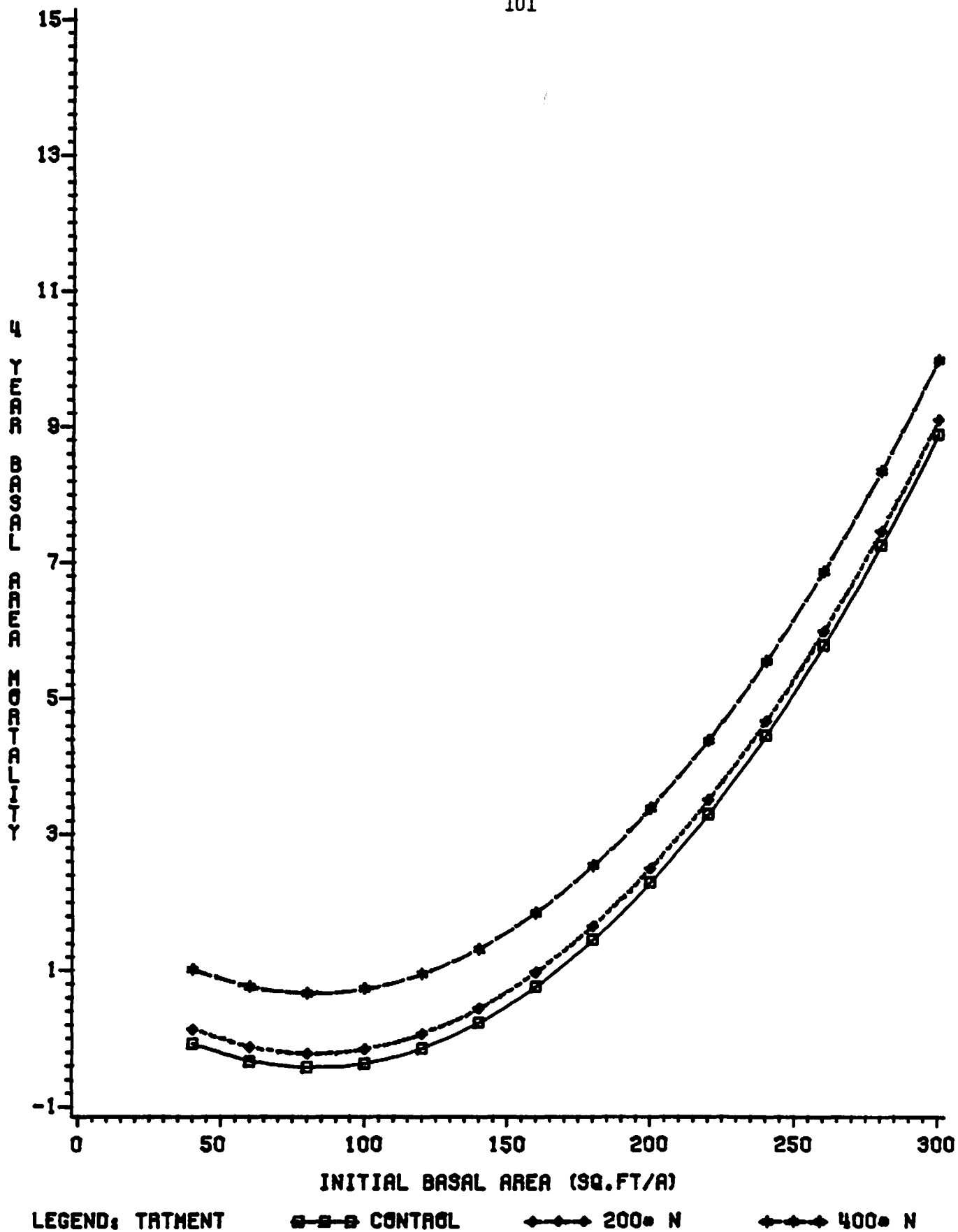


Figure 32

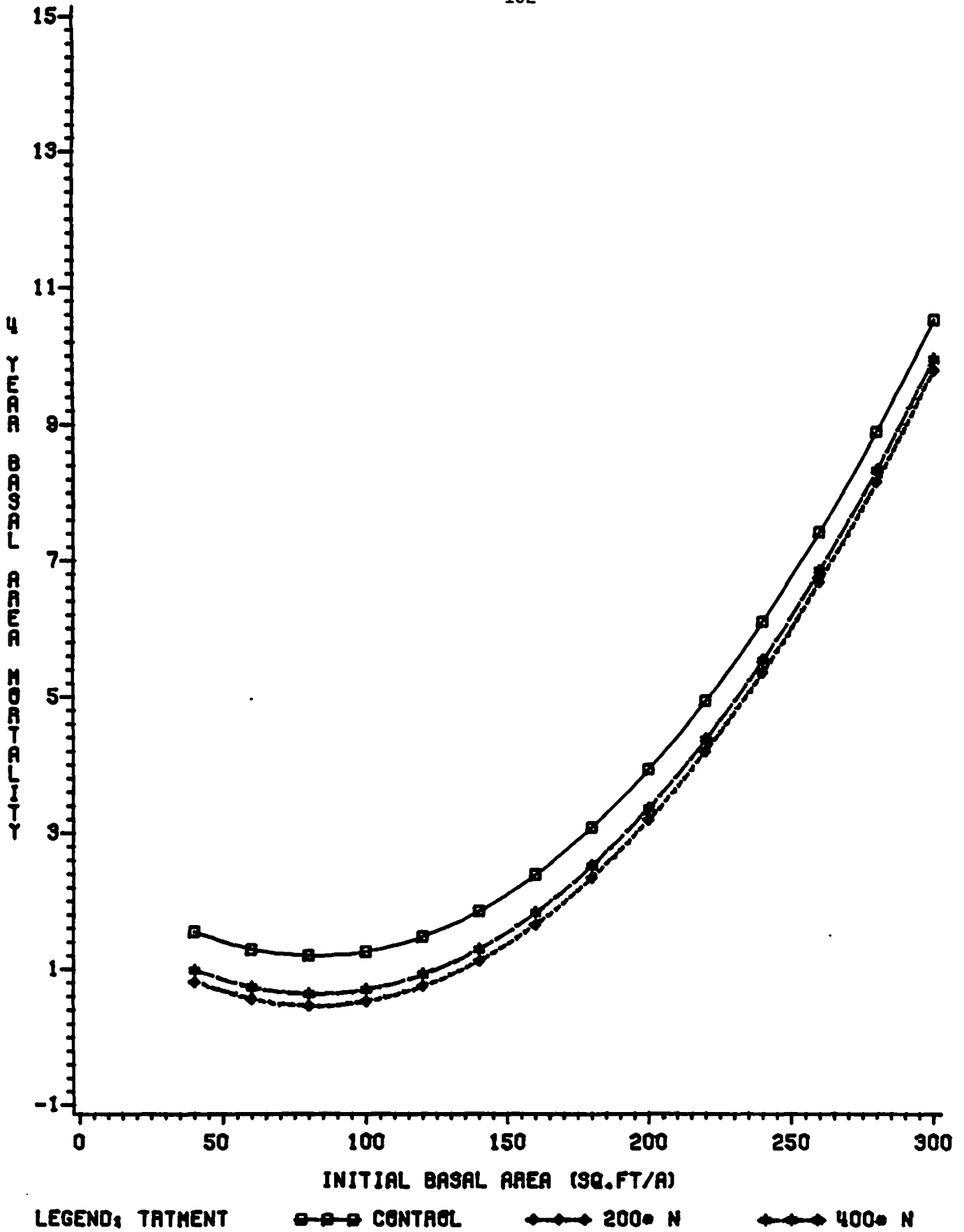


Figure 33

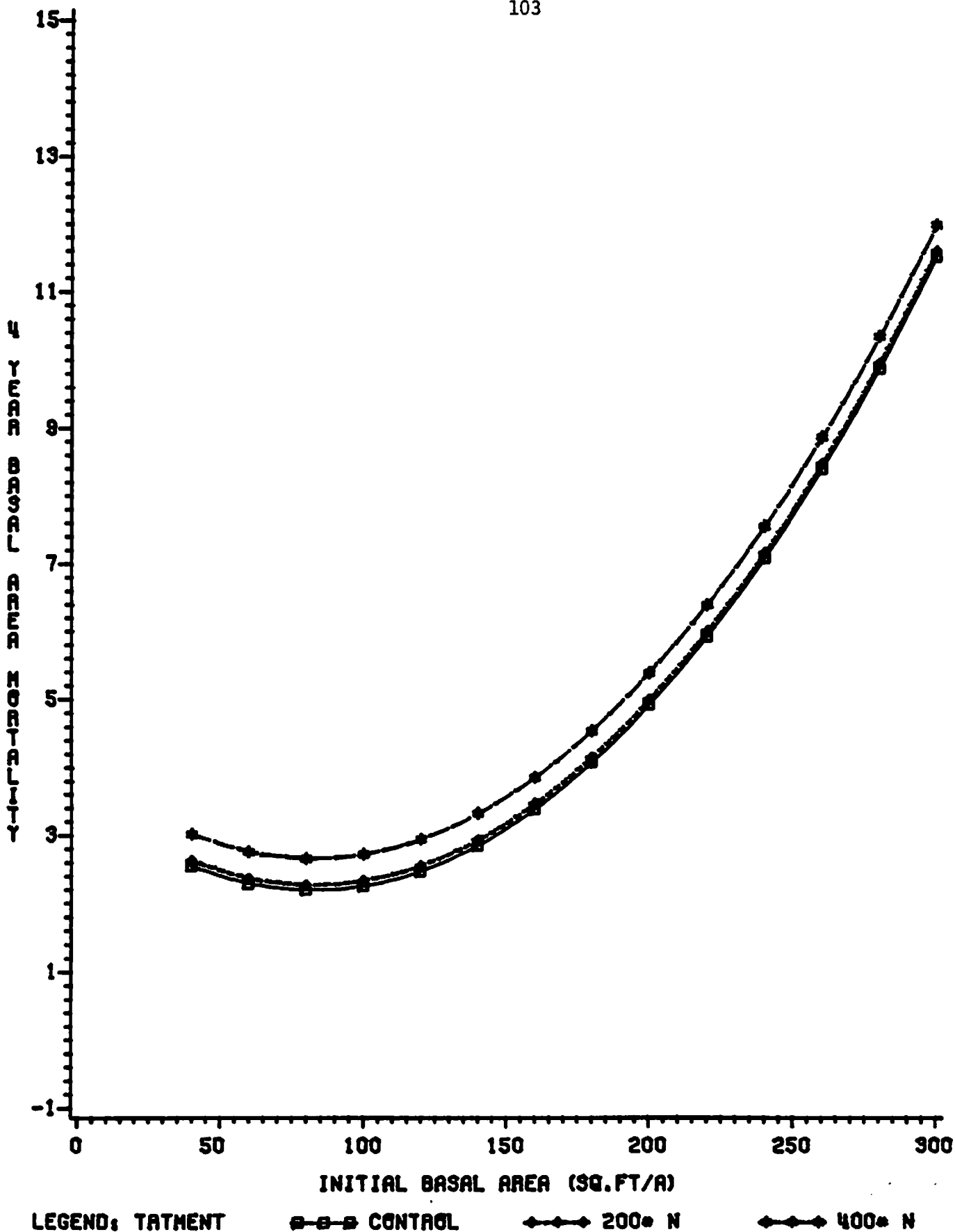


Figure 34

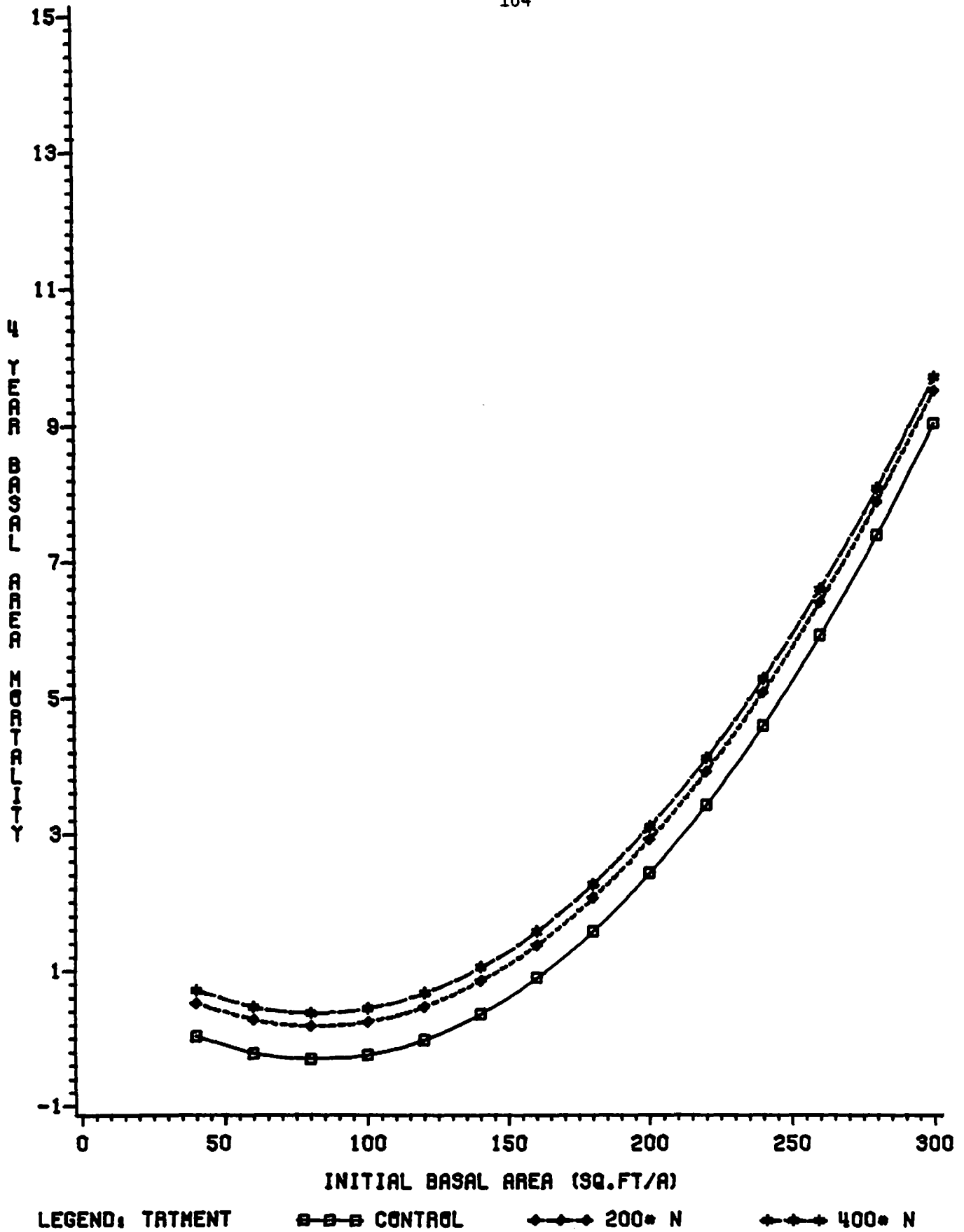


Figure 35

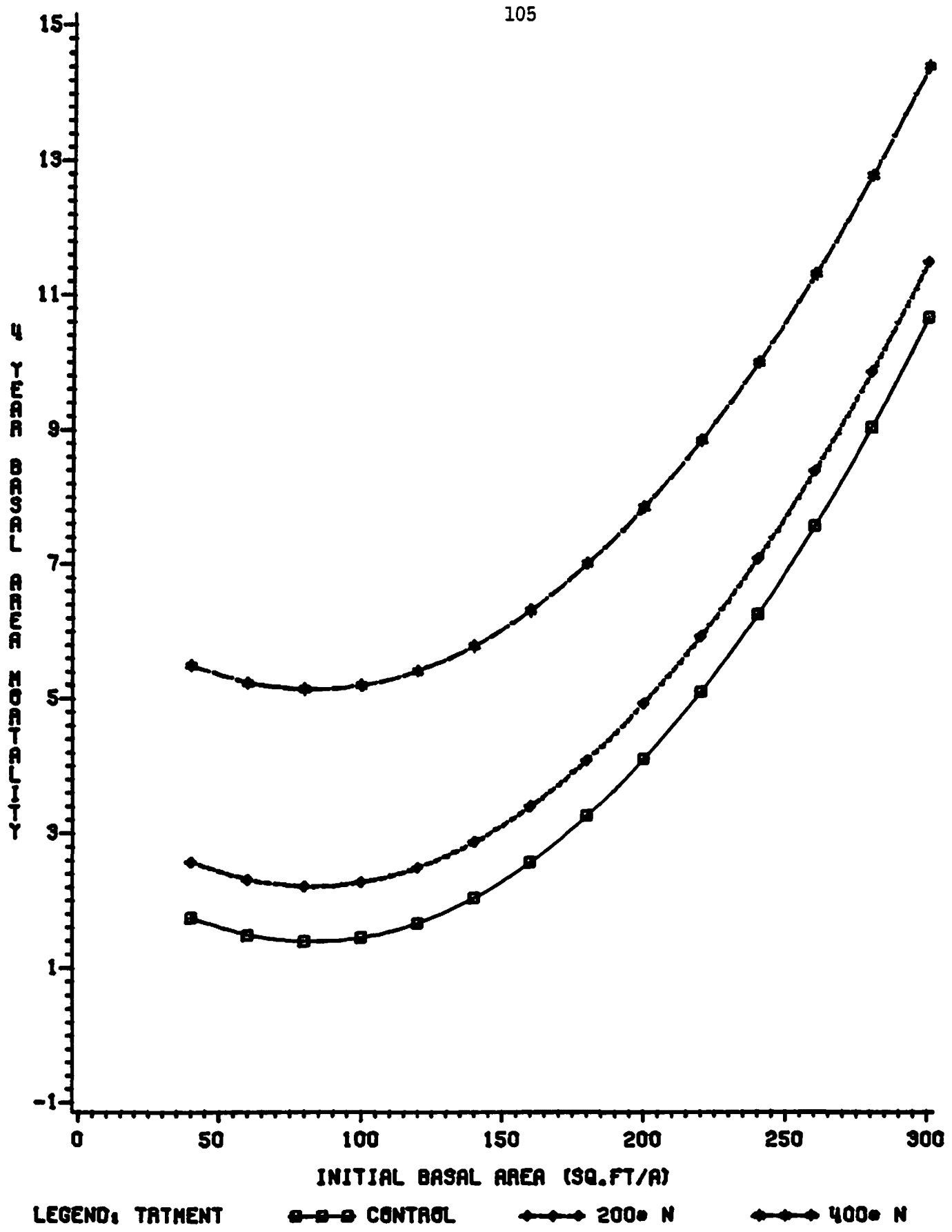


Figure 36

The Relationships Between Four-year Volume Mortality and Initial Basal Area
by Geographic Region

- Figure 37 Central Idaho
- Figure 38 Montana
- Figure 39 Northern Idaho
- Figure 40 Northeast Oregon
- Figure 41 Central Washington
- Figure 42 Northeast Washington

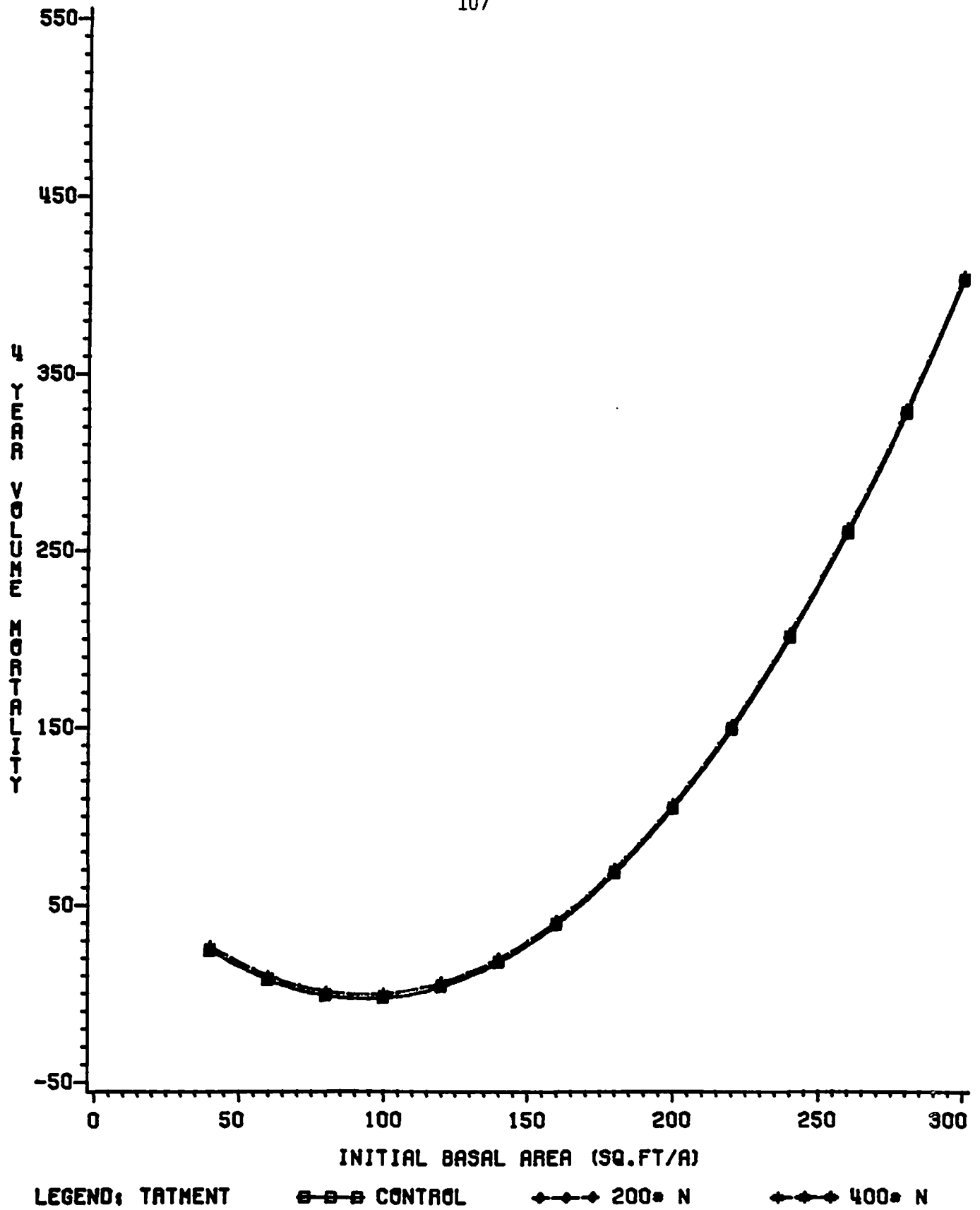


Figure 37

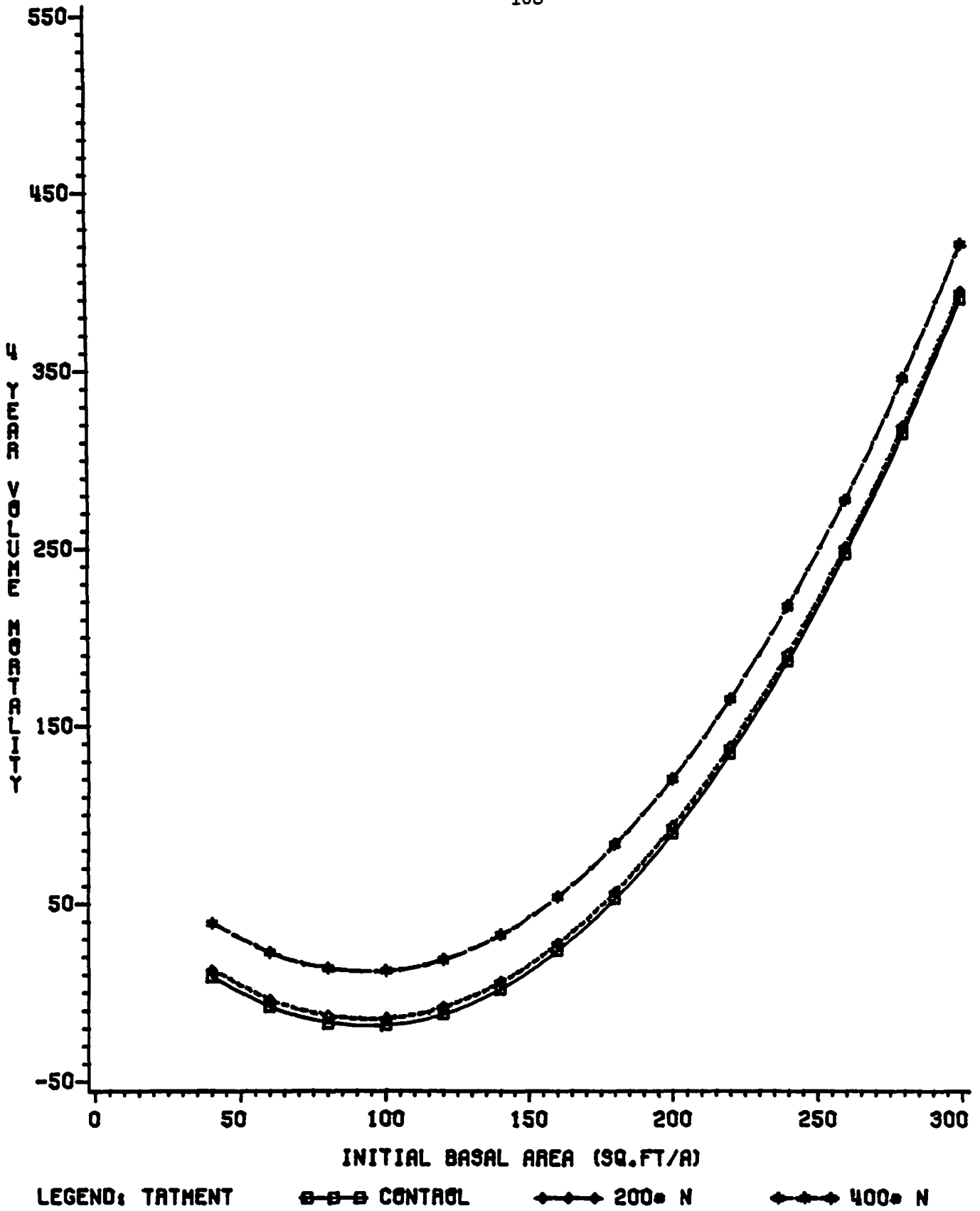


Figure 38

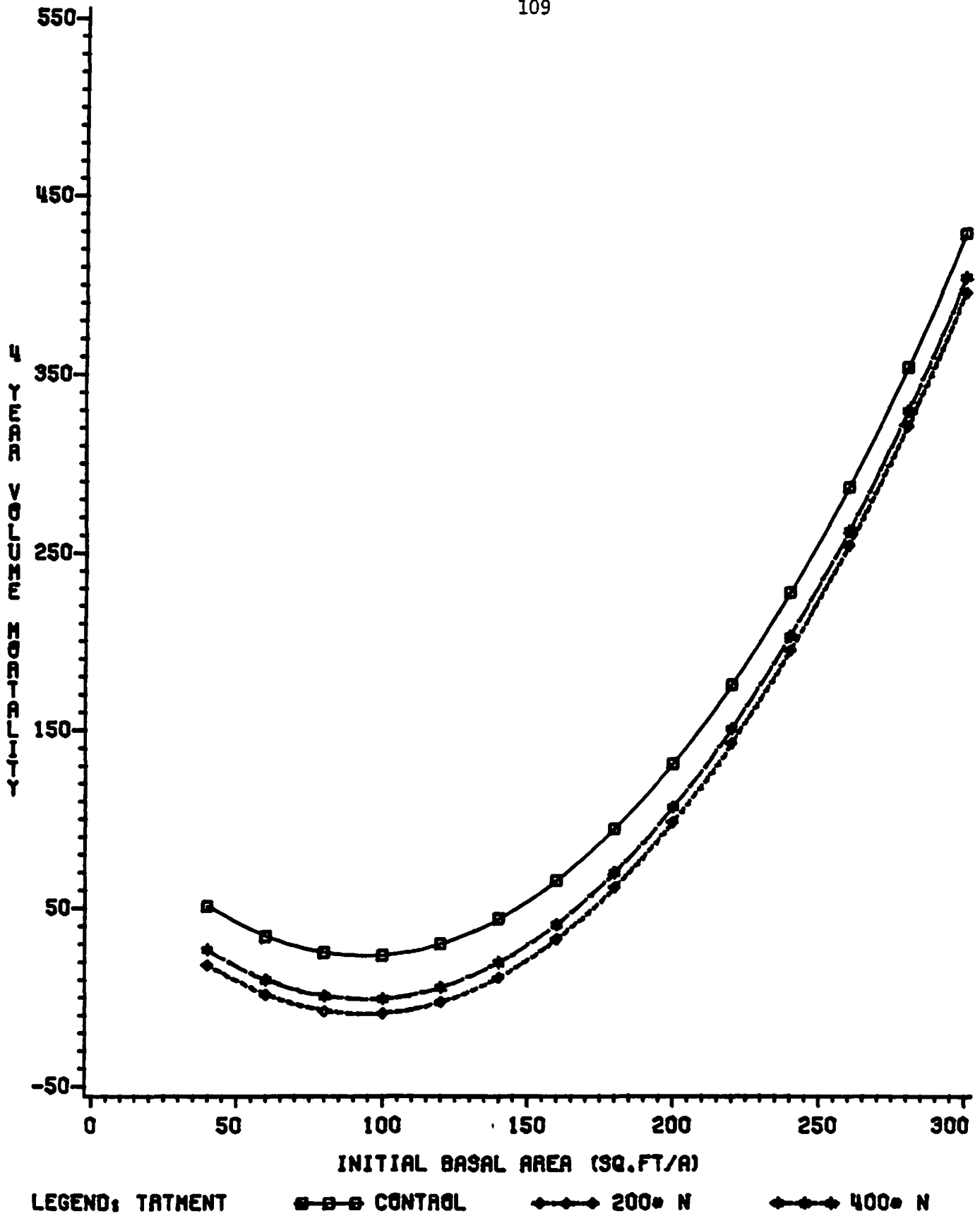


Figure 39

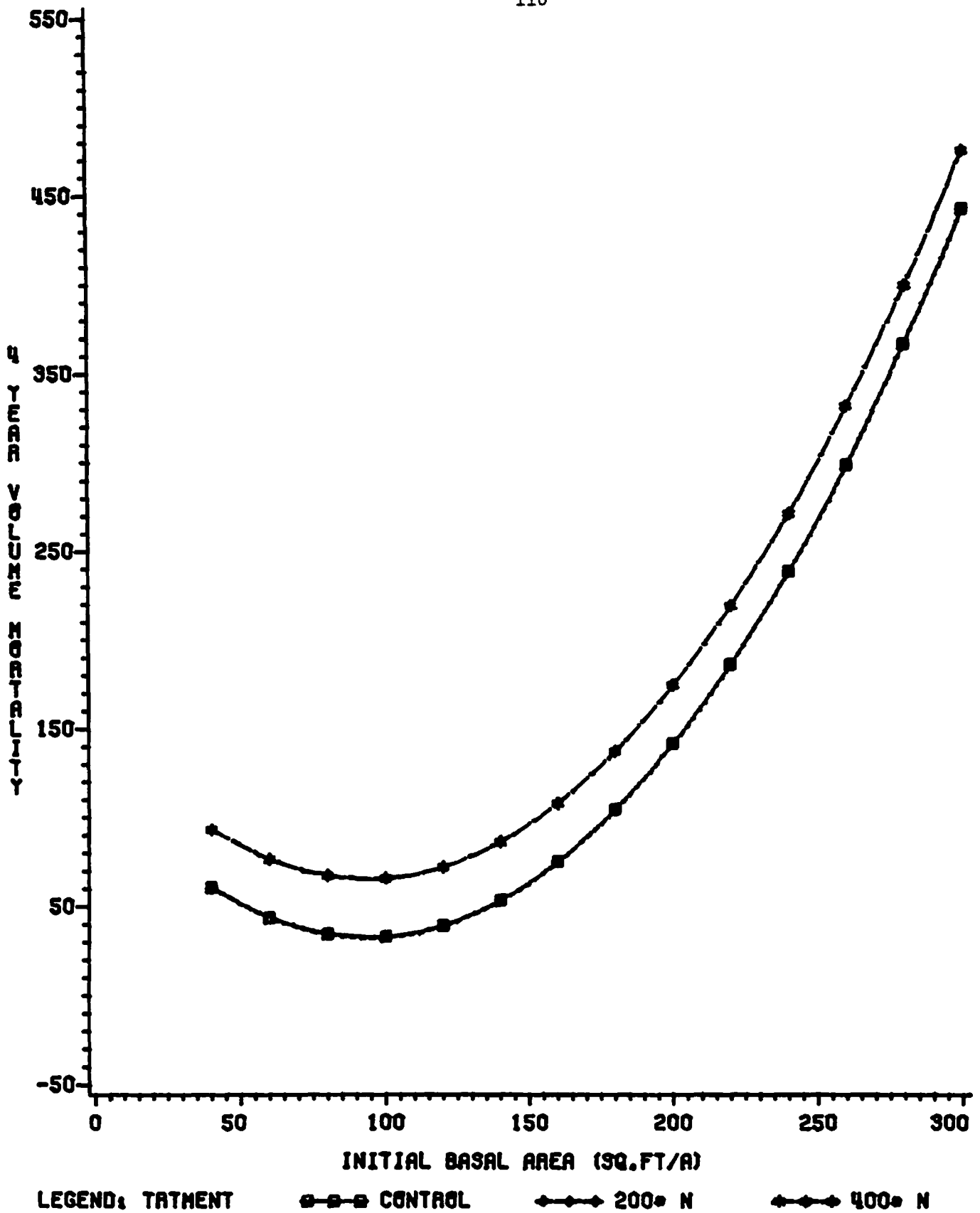


Figure 40

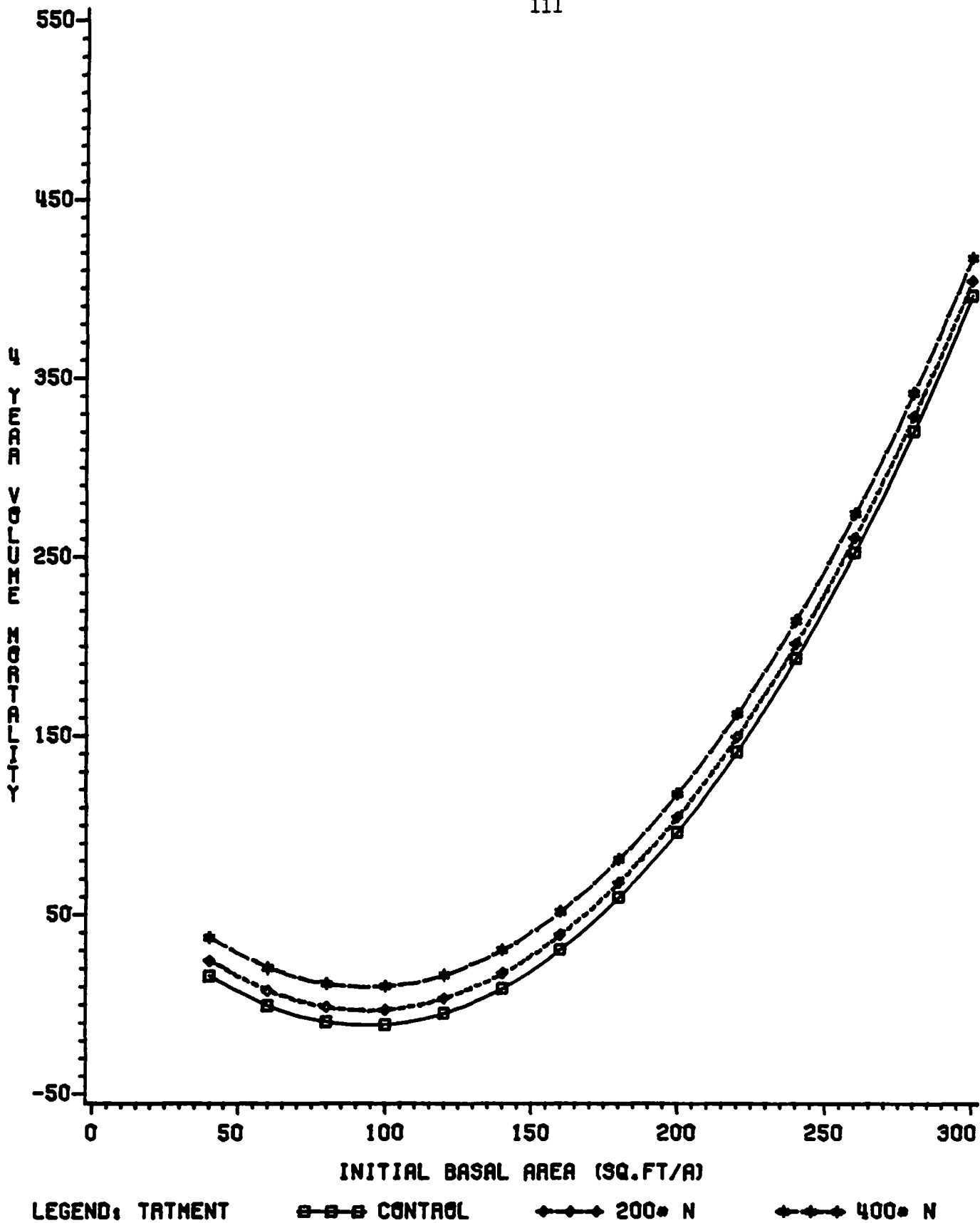


Figure 41

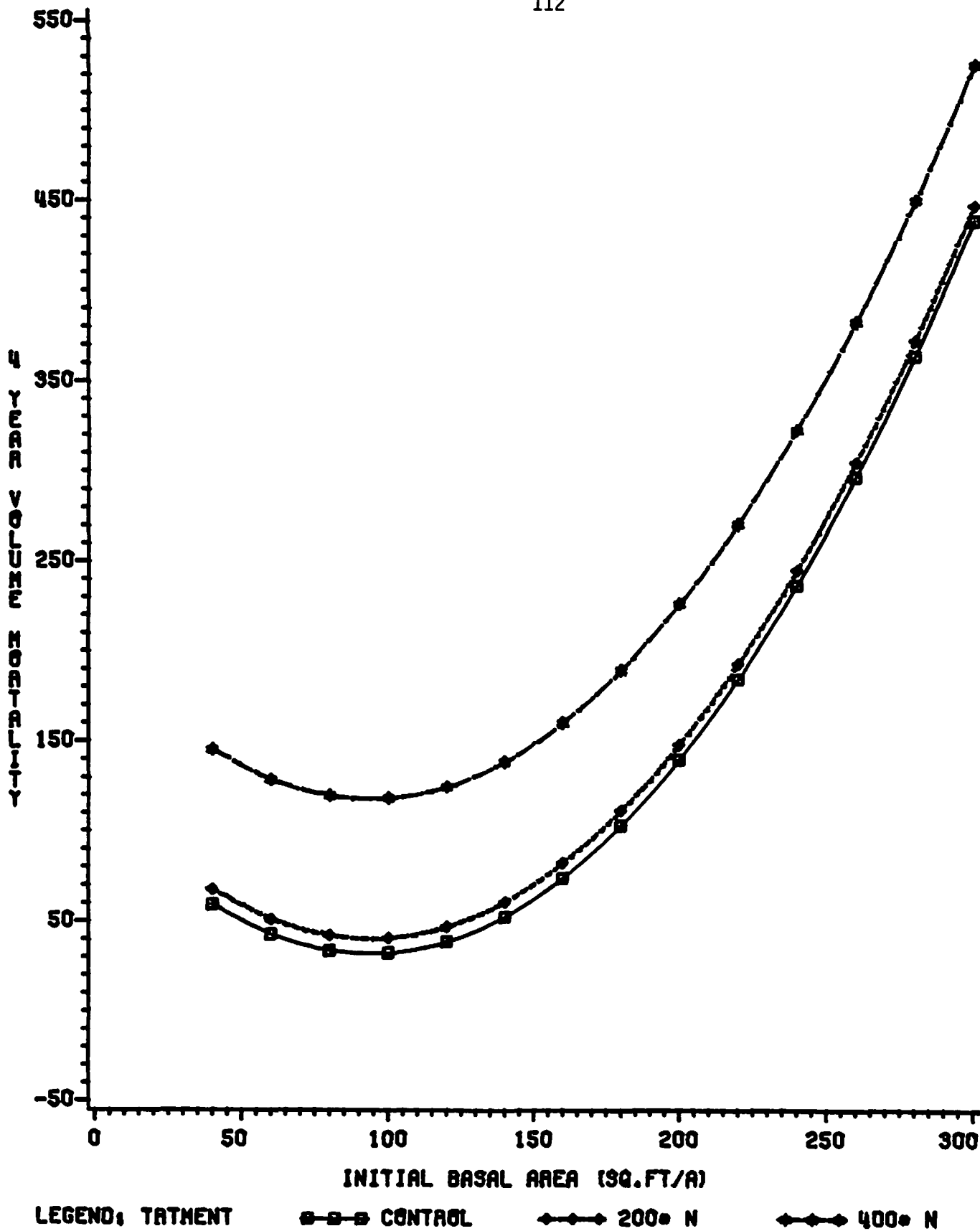


Figure 42

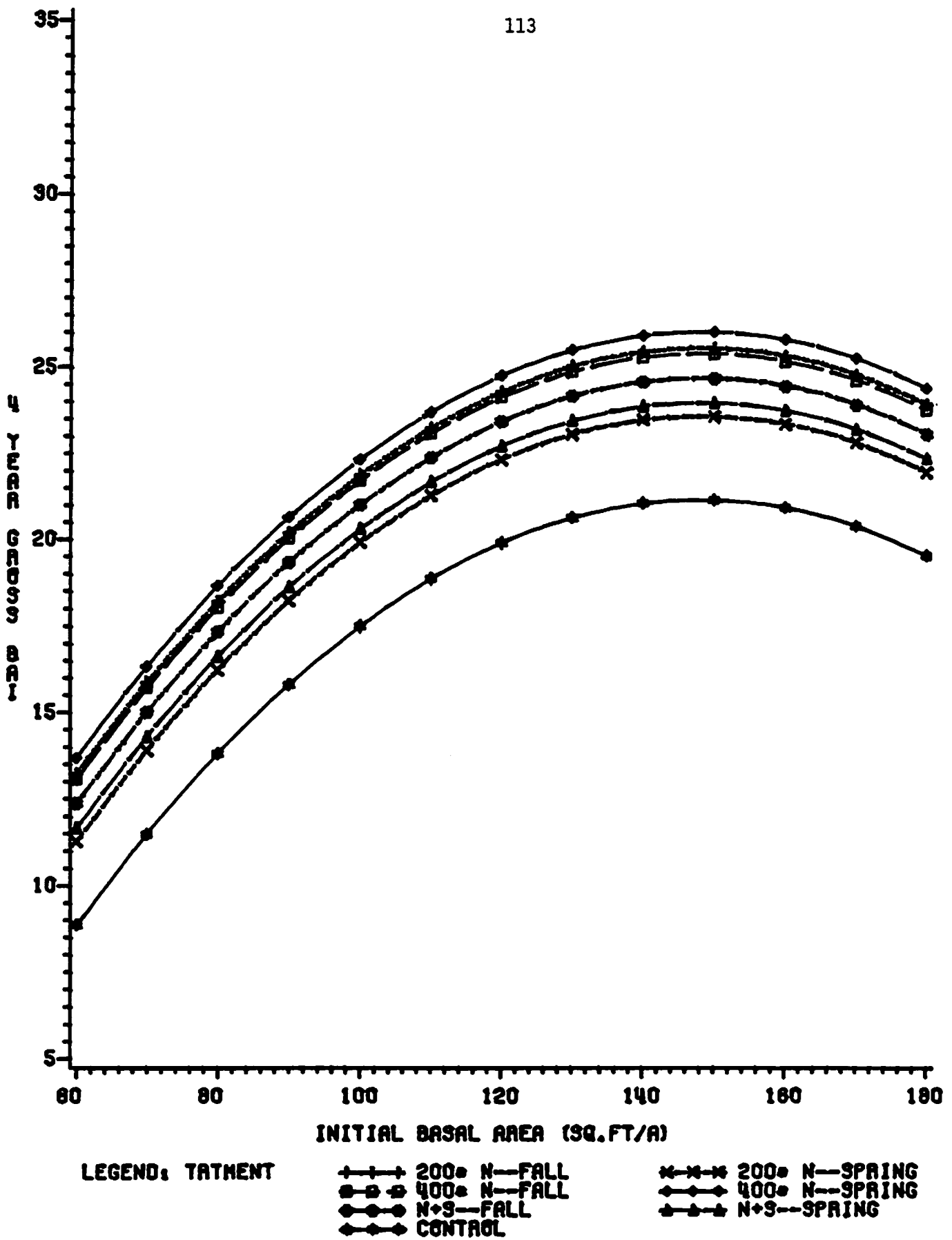


Figure 43. The relationship between four-year gross basal area increment and initial basal area for the 1980 installations.

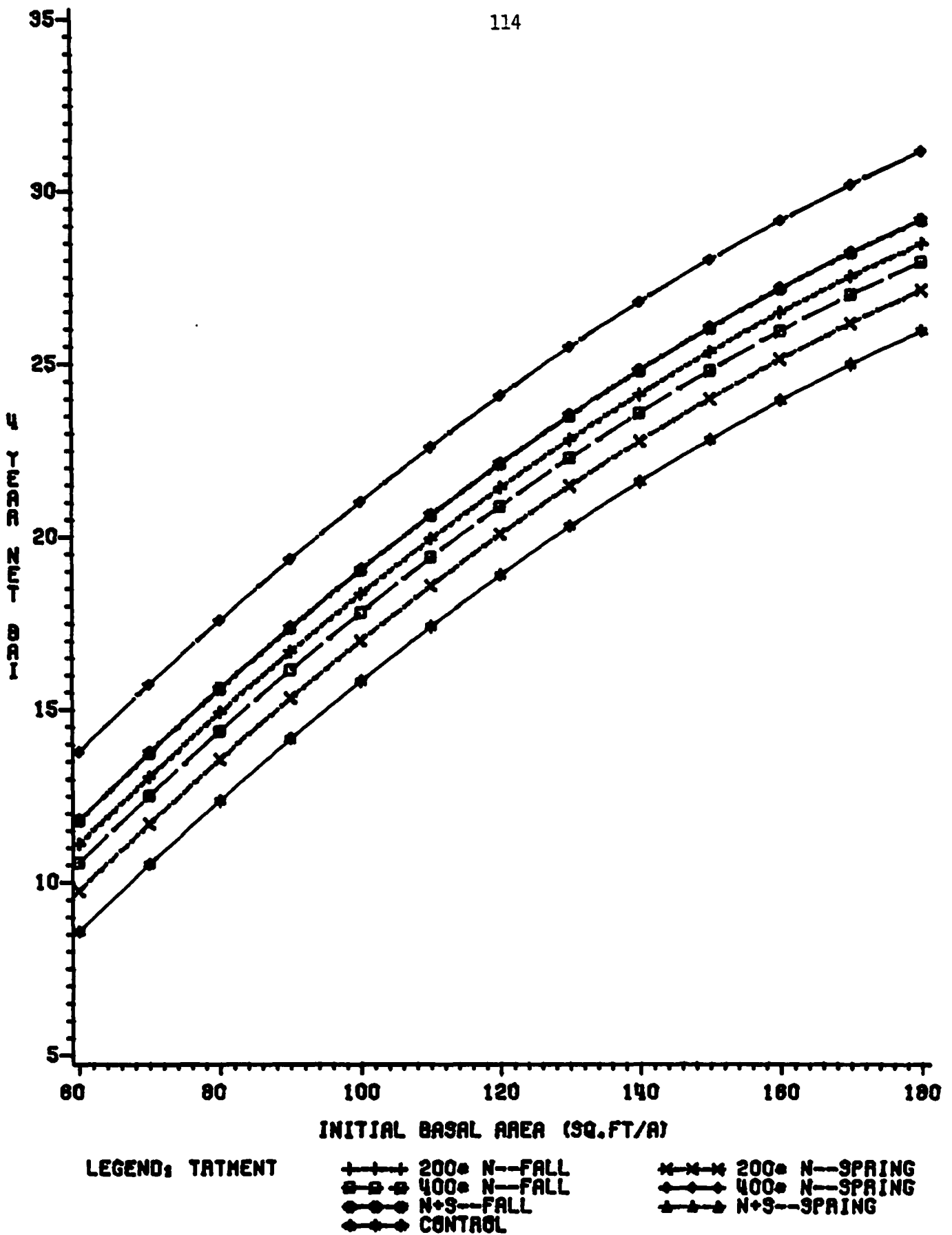


Figure 44. The relationship between four-year net basal area increment and initial basal area for the 1980 installations.

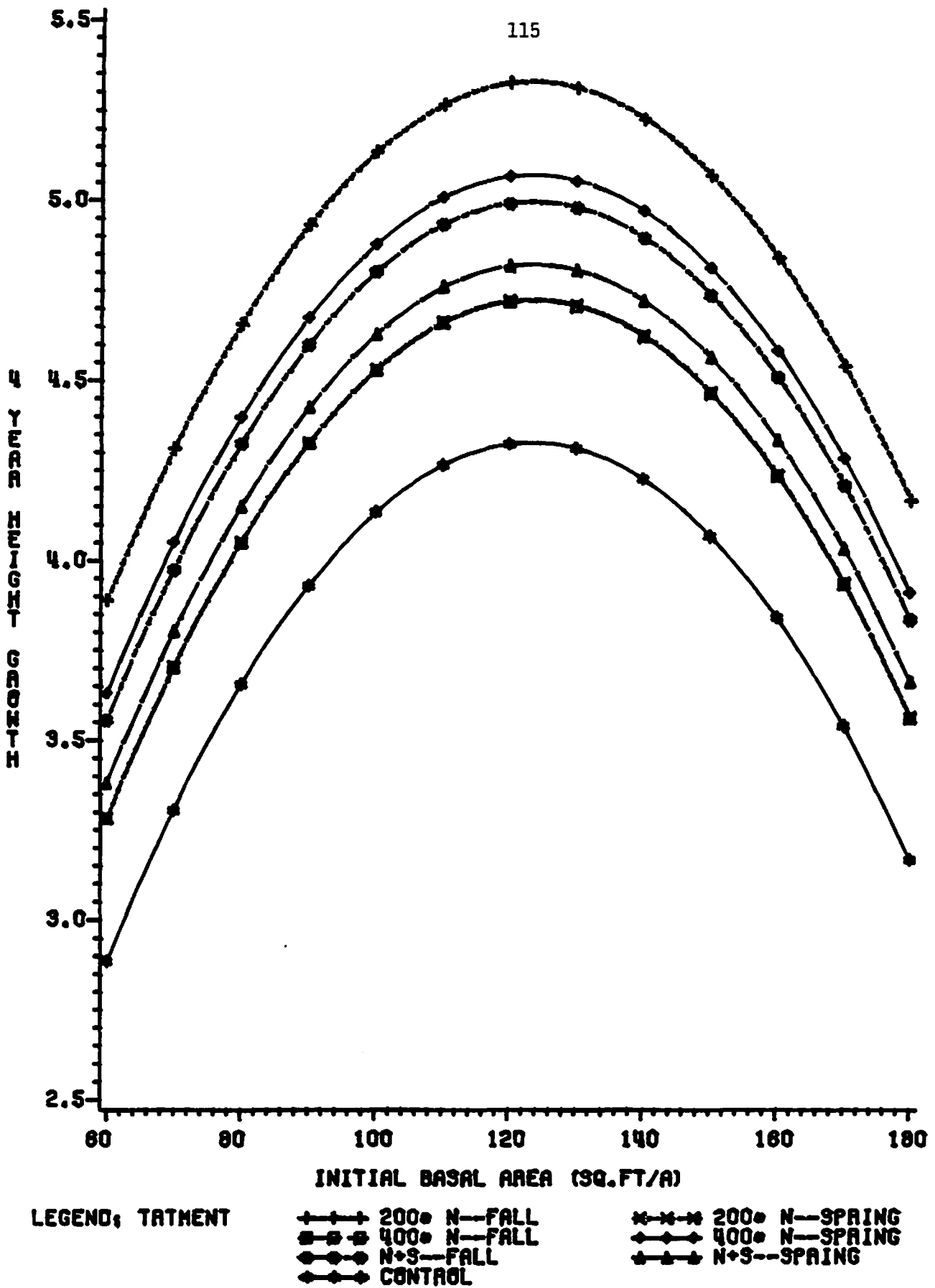


Figure 45. The relationship between four-year height increment and initial basal area for the 1980 installations.

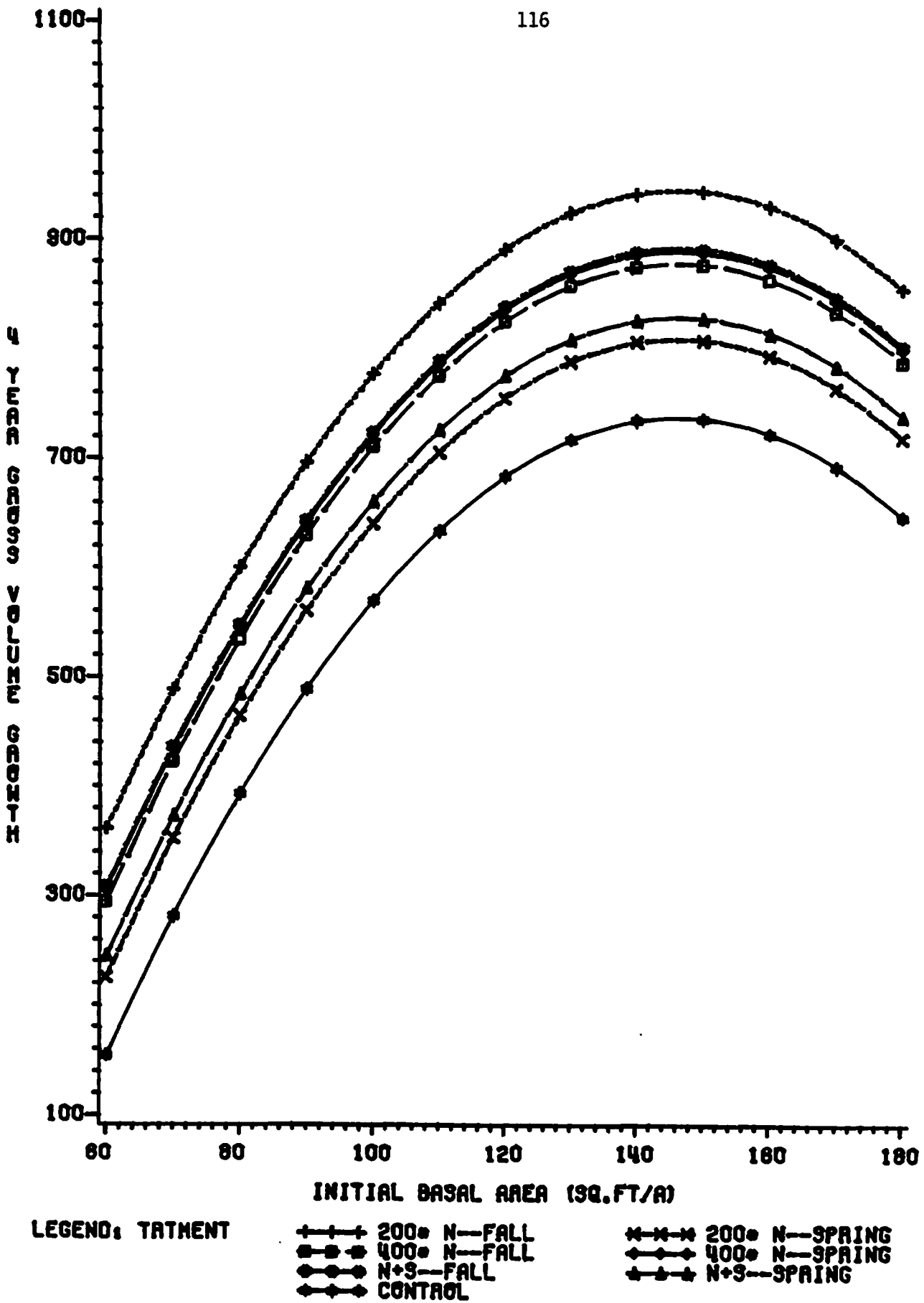


Figure 46. The relationship between four-year gross volume increment and initial basal area for the 1980 installations.

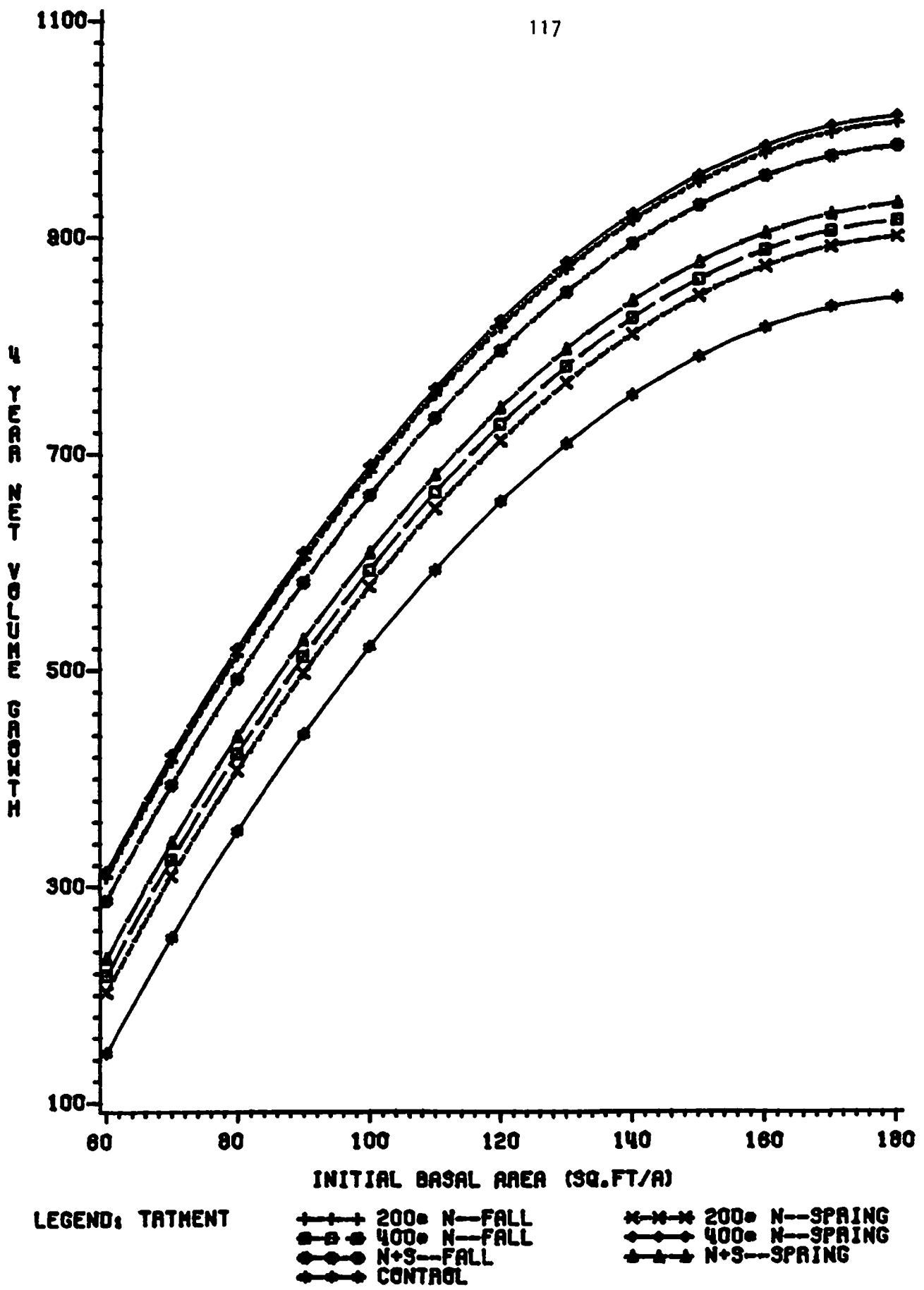


Figure 47. The relationship between four-year net volume increment and initial basal area for the 1980 installations.

SECTION III

Summary Characteristics and Growth Response
Estimates for each 1980 and 1981 Installation

INSTALLATION 103
REGION: CENTRAL IDAHO
LEGAL DESCRIPTION: T16N R4E SECTION 35 OWNERSHIP: POISE CASCADE MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 5000 FEET
SLOPE 22 PERCENT
DOUGLAS-FIR SITE INDEX 54.9 FEET AT 50 YEARS
VEGETATION SERIES GRAND FIR
PARENT MATERIAL GRANITE
ASH DEPTH NCNE
SOIL DEPTH DEEP (> 24 IN)
TOTAL NITROGEN . PPM
TOTAL PHOSPHORUS . PPM
CARBON . PERCENT
MINERALIZABLE NITROGEN . PPM
COARSE FRAGMENTS . PERCENT
CORRECTED MINERALIZABLE N . PPM

STAND CHARACTERISTICS:

INITIAL AGE 61 YEARS
INITIAL TREES PER ACRE 162 TREES/ACRE
INITIAL BASAL AREA 93.6 SQ.FEET/ACRE
INITIAL TOTAL VOLUME 2020 CU.FEET/ACRE
RELATIVE DENSITY INDEX 29.1
MEAN DIAMETER 10.3 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)
DOUGLAS-FIR 87.4 PERCENT
GRAND FIR 2.5 PERCENT
LODGEPOLE PINE 0.8 PERCENT
PONDEROSA PINE 9.3 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 93.6 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CONTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	15.5					
	200 # N	18.2	2.7	17.2			
	400 # N	14.1	-1.4	-9.1			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	15.5					
	200 # N	18.2	2.7	17.2			
	400 # N	16.9	1.4	9.2			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	3.5					
	200 # N	3.5	0.0	0.0			
	400 # N	2.9	-0.6	-17.8			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	439					
	200 # N	534	95	21.6			
	400 # N	420	-20	-4.5			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	439					
	200 # N	534	95	21.6			
	400 # N	472	33	7.6			
	FIRST TWO YEARS			SECOND TWO YEARS			
	RESPONSE						
	TRT	INC	DIFP	%	INC	DIFP	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON
	200
	400
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON
	200
	400

INSTALLATION 104
 REGION: NORTHEAST OREGON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T1N R45E SECTION 4 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	4400 FEET
SLOPE	24 PERCENT
DOUGLAS-FIR SITE INDEX	69.9 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	BASALT
ASH DEPTH	NONE
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	. PPM
TOTAL PHOSPHORUS	. PPM
CARBON	. PERCENT
MINERALIZABLE NITROGEN	. PPM
COARSE FRAGMENTS	. PERCENT
CORRECTED MINERALIZABLE N	. PPM

STAND CHARACTERISTICS:

INITIAL AGE	42 YEARS
INITIAL TREES PER ACRE	174 TREES/ACRE
INITIAL BASAL AREA	80.4 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	1581 CU.FEET/ACRE
RELATIVE DENSITY INDEX	26.4
MEAN DIAMETER	9.3 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	67.8 PERCENT
WESTERN LARCH	23.0 PERCENT
PONDEROSA PINE	9.3 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 80.4 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	17.0 17.7 19.5	0.7 2.5	4.0 14.9
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	17.0 17.7 19.5	0.7 2.5	4.0 14.9
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	5.0 5.0 4.9	0.0 -0.1	0.4 -3.0
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	497 511 540	14 43	2.9 8.8
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	497 511 541	14 44	2.9 8.9
		FIRST TWO YEARS	SECOND TWO YEARS	
		RESPONSE		
	TRT	INC	DIFP	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	...	...	...
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	...	...	...

INSTALLATION 105
 REGION: CENTRAL WASHINGTON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T1N R15E SECTION 21 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 2800 FEET
 SLOPE 13 PERCENT
 DOUGLAS-FIR SITE INDEX 67.7 FEET AT 50 YEARS
 VEGETATION SERIES GRAND FIR
 PARENT MATERIAL ALLUVIUM
 ASH DEPTH SHALLOW (< 3 IN)
 SOIL DEPTH DEEP (> 24 IN)
 TOTAL NITROGEN . PPM
 TOTAL PHOSPHORUS . PPM
 CARBON . PERCENT
 MINERALIZABLE NITROGEN . PPM
 COARSE FRAGMENTS . PERCENT
 CORRECTED MINERALIZABLE N . PPM

STAND CHARACTERISTICS:

INITIAL AGE 83 YEARS
 INITIAL TREES PER ACRE 182 TREES/ACRE
 INITIAL BASAL AREA 151.6 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 4731 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 42.9
 MEAN DIAMETER 12.5 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 81.8 PERCENT
 GRAND FIR 2.4 PERCENT
 WESTERN LARCH 8.5 PERCENT
 LODGEPOLE PINE 0.6 PERCENT
 PONDEROSA PINE 6.7 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 151.6 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	15.2		
	200 # N	19.8	4.6	30.4
	400 # N	17.8	2.6	17.2
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	15.2		
	200 # N	19.8	4.6	30.4
	400 # N	23.8	8.6	56.9
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	2.0		
	200 # N	3.4	1.4	67.4
	400 # N	4.0	1.9	93.6
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	559		
	200 # N	793	234	41.9
	400 # N	763	204	36.4
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	559		
	200 # N	793	234	41.9
	400 # N	957	398	71.1
			FIRST TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	.	.	.
	200	.	.	.
	400	.	.	.
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	.	.	.
	200	.	.	.
	400	.	.	.
			SECOND TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	.	.	.
	200	.	.	.
	400	.	.	.
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	.	.	.
	200	.	.	.
	400	.	.	.

INSTALLATION 106
 REGION: NORTHEAST WASHINGTON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T30N R39E SECTION 7 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	2700 FEET
SLOPE	46 PERCENT
DOUGLAS-FIR SITE INDEX	80.4 FEET AT 50 YEARS
VEGETATION SERIES	WESTERN REDCEDAR
PARENT MATERIAL	GLACIAL TILL
ASH DEPTH	SHALLOW (< 3 IN)
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	PPM
TOTAL PHOSPHORUS	PPM
CARBON	PERCENT
MINERALIZABLE NITROGEN	PPM
COARSE FRAGMENTS	PERCENT
CORRECTED MINERALIZABLE N	PPM

STAND CHARACTERISTICS:

INITIAL AGE	41 YEARS
INITIAL TREES PER ACRE	240 TREES/ACRE
INITIAL BASAL AREA	90.0 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2065 CU.FEET/ACRE
RELATIVE DENSITY INDEX	31.2
MEAN DIAMETER	8.4 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	93.5 PERCENT
GRAND FIR	0.3 PERCENT
WESTERN REDCEDAR	0.3 PERCENT
WESTERN LARCH	3.0 PERCENT
PONDEROSA PINE	2.9 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 90.0 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	18.4		
	200 # N	15.9	-2.5	-13.4
	400 # N	25.3	6.9	37.4
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	19.7		
	200 # N	22.9	3.1	15.9
	400 # N	25.3	5.6	28.4
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	5.2		
	200 # N	5.7	0.5	9.7
	400 # N	6.1	0.9	17.9
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	615		
	200 # N	595	-19	-3.1
	400 # N	772	157	25.6
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	636		
	200 # N	721	86	13.5
	400 # N	772	137	21.5

	TRT	FIRST TWO YEARS			SECOND TWO YEARS		
		RESPONSE			RESPONSE		
		INC	DIFF	%	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	.	.	.	.	.	.
	200	:	:	:	:	:	:
	400	:	:	:	:	:	:
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	.	.	.	.	.	.
	200	:	:	:	:	:	:
	400	:	:	:	:	:	:

INSTALLATION 201
 REGION: CENTRAL IDAHO OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T16N R4E SECTION 21 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	5500 FEET
SLOPE	18 PERCENT
DOUGLAS-FIR SITE INDEX	62.6 FEET AT 50 YEARS
VEGETATION SERIES	GRAND FIR
PARENT MATERIAL	GRANITE
ASH DEPTH	NCNE
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	1627 PPM
TOTAL PHOSPHORUS	694 PPM
CARBON	1.35 PERCENT
MINERALIZABLE NITROGEN	23.2 PPM
COARSE FRAGMENTS	17.3 PERCENT
CORRECTED MINERALIZABLE N	19.3 PPM

STAND CHARACTERISTICS:

INITIAL AGE	59 YEARS
INITIAL TREES PER ACRE	228 TREES/ACRE
INITIAL BASAL AREA	113.7 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2544 CU.FEET/ACRE
RELATIVE DENSITY INDEX	36.7
MEAN DIAMETER	9.6 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	82.1 PERCENT
GRAND FIR	2.0 PERCENT
WESTERN LARCH	1.5 PERCENT
LODGEPOLE PINE	0.5 PERCENT
PONDEROSA PINE	14.0 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 113.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	15.1		
	200 # N	16.0	0.9	5.8
	400 # N	22.0	6.9	45.8
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	15.1		
	200 # N	16.0	0.9	5.8
	400 # N	22.0	6.9	45.8
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	3.7		
	200 # N	4.5	0.8	22.3
	400 # N	4.2	0.5	14.6
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	469		
	200 # N	572	102	21.8
	400 # N	691	222	47.2
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	469		
	200 # N	572	102	21.8
	400 # N	691	222	47.2
			FIRST TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	7.6		
	200	7.7	0.2	2.0
	400	11.1	3.6	47.2
			SECOND TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	7.6		
	200	7.7	0.2	2.0
	400	11.1	3.6	47.2
			SECOND TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	7.6		
	200	7.7	0.2	2.0
	400	11.1	3.6	47.2

INSTALLATION 202

REGION: CENTRAL IDAHO

LEGAL DESCRIPTION: T13N R5E

SECTION 18

OWNERSHIP: BOISE CASCADE

MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	5500 FEET
SLOPE	29 PERCENT
DOUGLAS-FIR SITE INDEX	55.9 FEET AT 50 YEARS
VEGETATION SERIES	DOUGLAS-FIR
PARENT MATERIAL	GRANITE
ASH DEPTH	NCNE
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	1427 PPM
TOTAL PHOSPHORUS	356 PPM
CARBON	1.17 PERCENT
MINERALIZABLE NITROGEN	20.3 PPM
COARSE FRAGMENTS	31.1 PERCENT
CORRECTED MINERALIZABLE N	14.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	58 YEARS
INITIAL TREES PER ACRE	182 TREES/ACRE
INITIAL BASAL AREA	66.9 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	1285 CU.FEET/ACRE
RELATIVE DENSITY INDEX	23.3
MEAN DIAMETER	8.3 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	85.0 PERCENT
LOGSFOLE PINE	4.5 PERCENT
PONDEROSA PINE	10.5 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 66.9 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CONTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	13.6					
	200 # N	16.3	2.7	19.6			
	400 # N	18.4	4.8	35.2			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	13.6					
	200 # N	16.3	2.7	19.6			
	400 # N	18.4	4.8	35.4			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	3.1					
	200 # N	3.3	0.2	7.3			
	400 # N	4.5	1.5	48.5			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	337					
	200 # N	395	58	17.2			
	400 # N	463	126	37.4			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	337					
	200 # N	395	58	17.2			
	400 # N	466	129	38.3			
		FIRST TWO YEARS	SECOND TWO YEARS				
		RESPONSE		RESPONSE			
	TRT	INC	DIFP	%	INC	DIFP	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	6.4			7.2		
	200	8.0	1.6	24.8	8.2	1.0	14.5
	400	9.2	2.7	42.6	9.2	2.1	28.7
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	6.4			7.2		
	200	8.0	1.6	25.0	8.2	1.0	14.5
	400	9.2	2.7	42.5	9.3	2.1	29.4

INSTALLATION 203
 REGION: CENTRAL IDAHO OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T16N R4E SECTION 29 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	5500 FEET
SLOPE	24 PERCENT
DOUGLAS-FIR SITE INDEX	57.6 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	GRANITE
ASH DEPTH	NCNE
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	1260 PPM
TOTAL PHOSPHORUS	822 PPM
CARBON	1.29 PERCENT
MINERALIZABLE NITROGEN	19.2 PPM
CCARSE FRAGMENTS	11.2 PERCENT
CORRECTED MINERALIZABLE N	17.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	69 YEARS
INITIAL TREES PER ACRE	165 TREES/ACRE
INITIAL BASAL AREA	100.7 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2462 CU.FEET/ACRE
RELATIVE DENSITY INDEX	30.9
MEAN DIAMETER	10.6 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	78.7 PERCENT
GRAND FIR	6.3 PERCENT
WESTERN LARCH	2.4 PERCENT
PONDEROSA PINE	12.6 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 100.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CCNTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CCNTROL	11.7					
	200 # N	15.7	4.0	34.4			
	400 # N	14.2	2.5	21.8			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CCNTROL	12.1					
	200 # N	15.7	3.6	29.5			
	400 # N	14.2	2.1	17.5			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CCNTROL	3.9					
	200 # N	4.0	0.1	2.6			
	400 # N	2.8	-1.1	-28.1			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL	469					
	200 # N	516	46	9.9			
	400 # N	471	2	0.4			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL	473					
	200 # N	516	43	9.1			
	400 # N	472	-1	-0.2			
		FIRST TWO YEARS		SECND TWO YEARS			
		RESPCNSE					
	TRT	INC	DIFF	%	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	5.8			5.9		
	200	8.2	2.5	43.0	7.5	1.6	26.6
	400	7.7	2.0	34.6	6.4	0.5	8.9
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	5.8			6.3		
	200	8.2	2.5	42.5	7.5	1.1	18.1
	400	7.8	2.0	34.9	6.4	0.1	1.5

INSTALLATION 204
 REGION: NORTHERN IDAHO OWNERSHIP: IDL
 LEGAL DESCRIPTION: T37N R3E SECTION 4 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3300 FEET
SLOPE	33 PERCENT
DOUGLAS-FIR SITE INDEX	80.4 FEET AT 50 YEARS
VEGETATION SERIES	GRAND FIR
PARENT MATERIAL	ASH OVER METASEDIMENT
ASH DEPTH	MEDIUM (3 TO 12 IN)
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	2213 PPM
TOTAL PHOSPHORUS	686 PPM
CARBON	1.63 PERCENT
MINERALIZABLE NITROGEN	30.0 PPM
COARSE FRAGMENTS	8.2 PERCENT
CORRECTED MINERALIZABLE N	27.7 PPM

STAND CHARACTERISTICS:

INITIAL AGE	41 YEARS
INITIAL TREES PER ACRE	238 TREES/ACRE
INITIAL BASAL AREA	104.3 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2502 CU.FEET/ACRE
RELATIVE DENSITY INDEX	34.8
MEAN DIAMETER	8.9 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	86.9 PERCENT
GRAND FIR	13.1 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 104.3 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	14.8		
	200 # N	22.0	7.2	48.5
	400 # N	28.8	14.0	94.6
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	21.5		
	200 # N	28.0	6.4	29.9
	400 # N	31.2	9.7	45.1
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	5.6		
	200 # N	6.9	1.3	24.2
	400 # N	7.3	1.8	31.5
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	531		
	200 # N	860	329	61.9
	400 # N	1032	501	94.4
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	698		
	200 # N	979	281	40.2
	400 # N	1083	384	55.0

	TRT	FIRST TWO YEARS				SECOND TWO YEARS			
		INC	RESPONSE		INC	RESPONSE			
			DIFF	%		DIFF	%		
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	11.2							
	200	14.2	3.1	27.6	3.6	4.1	114.3		
	400	16.3	5.1	46.0	7.7	8.9	246.6		
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	11.2							
	200	15.1	3.9	35.1	10.4	2.5	24.1		
	400	16.3	5.1	46.1	12.9	4.5	43.8		

INSTALLATION 205
 REGION: NORTHERN IDAHO OWNERSHIP: IDL
 LEGAL DESCRIPTION: T37N R3E SECTION 4 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3300 FEET
SLOPE	13 PERCENT
DOUGLAS-FIR SITE INDEX	86.4 FEET AT 50 YEARS
VEGETATION SERIES	WESTERN REDCEDAR
PARENT MATERIAL	ASH COVER METASEDIMENT
ASH DEPTH	DEEP (> 12 IN)
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	3166 PPM
TOTAL PHOSPHORUS	804 PPM
CARBON	1.87 PERCENT
MINERALIZABLE NITROGEN	33.8 PPM
COARSE FRAGMENTS	6.3 PERCENT
CORRECTED MINERALIZABLE N	31.7 PPM

STAND CHARACTERISTICS:

INITIAL AGE	41 YEARS
INITIAL TREES PER ACRE	230 TREES/ACRE
INITIAL BASAL AREA	111.7 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2854 CU.FEET/ACRE
RELATIVE DENSITY INDEX	36.3
MEAN DIAMETER	9.4 INCHES
SPECIES COMPOSITION (% OF TOTAL EA)	
DOUGLAS-FIR	77.2 PERCENT
GRAND FIR	13.6 PERCENT
WESTERN REDCEDAR	2.1 PERCENT
WESTERN LARCH	3.6 PERCENT
LODGEPOLE PINE	2.5 PERCENT
WHITE PINE	0.9 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 111.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	18.6 27.3 28.0	8.7 9.4	47.0 50.6
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	19.9 27.3 30.0	7.4 10.1	37.1 50.6
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	6.2 8.0 7.6	1.7 1.4	27.4 21.9
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	740 1106 1069	365 329	49.3 44.4
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	774 1106 1116	332 342	42.8 44.2
			FIRST TWO YEARS	SECOND TWO YEARS
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	10.3 14.8 13.6	4.5 3.3	43.6 31.6
			INC	DIFF
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	10.4 14.8 15.7	4.4 5.3	42.5 51.5
			INC	DIFF
			8.2 12.5 14.2	4.3 6.0
			9.5 12.5 14.2	3.0 4.7
				52.0 73.1
				31.6 49.9

INSTALLATION 206
 REGION: NORTHERN IDAHO
 LEGAL DESCRIPTION: T34N R4E SECTION 36
 OWNERSHIP: IDL
 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3200 FEET
SLOPE	4 PERCENT
DOUGLAS-FIR SITE INDEX	81.1 FEET AT 50 YEARS
VEGETATION SERIES	WESTERN REDCEDAR
PARENT MATERIAL	ASH AND/OR LOESS
ASH DEPTH	DEEP (> 12 IN)
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	2603 PPM
TOTAL PHOSPHORUS	659 PPM
CARBON	1.17 PERCENT
MINERALIZABLE NITROGEN	27.5 PPM
COARSE FRAGMENTS	15.0 PERCENT
CORRECTED MINERALIZABLE N	23.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	46 YEARS
INITIAL TREES PER ACRE	260 TREES/ACRE
INITIAL BASAL AREA	152.4 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	4009 CU.FEET/ACRE
RELATIVE DENSITY INDEX	47.3
MEAN DIAMETER	10.4 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	78.2 PERCENT
GRAND FIR	7.5 PERCENT
WESTERN REDCEDAR	4.5 PERCENT
WESTERN LARCH	6.4 PERCENT
PONDEROSA PINE	1.5 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 152.4 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE		
			DIFFERENCE	% OF CONTROL	
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	18.0			
	200 # N	25.2	7.1	39.6	
	400 # N	25.1	7.1	39.5	
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	20.0			
	200 # N	25.2	5.2	25.9	
	400 # N	25.3	5.3	26.4	
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	6.7			
	200 # N	5.9	-0.8	-11.8	
	400 # N	6.5	-0.2	-2.3	
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	860			
	200 # N	1053	193	22.4	
	400 # N	1096	236	27.4	
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	918			
	200 # N	1053	135	14.7	
	400 # N	1096	178	19.4	
			FIRST TWO YEARS	SECOND TWO YEARS	
			RESPONSE		
	TRT	INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	10.7			
	200	13.8	3.1	29.3	
	400	13.9	3.2	29.9	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	10.8			
	200	13.8	3.0	27.5	
	400	13.9	3.0	28.1	
			INC	DIFF	%
			7.3		
			11.4	4.1	55.8
			11.0	3.8	51.5
			9.1		
			11.4	2.2	24.2
			11.4	2.2	24.5

INSTALLATION 207
 REGION: NORTHEAST OREGON OWNERSHIP: POTLATCH
 LEGAL DESCRIPTION: T33N R4W SECTION 10 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3600 FEET
SLOPE	18 PERCENT
DOUGLAS-FIR SITE INDEX	71.5 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	BASALT
ASH DEPTH	TRACE
SOIL DEPTH	MODERATE (12 TO 24 IN)
TOTAL NITROGEN	3211 PPM
TOTAL PHOSPHORUS	731 PPM
CARBON	2.06 PERCENT
MINERALIZABLE NITROGEN	40.2 PPM
COARSE FRAGMENTS	17.1 PERCENT
CORRECTED MINERALIZABLE N	32.7 PPM

STAND CHARACTERISTICS:

INITIAL AGE	55 YEARS
INITIAL TREES PER ACRE	277 TREES/ACRE
INITIAL BASAL AREA	156.8 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	3988 CU.FEET/ACRE
RELATIVE DENSITY INDEX	49.1
MEAN DIAMETER	10.2 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	68.0 PERCENT
GRAND FIR	2.1 PERCENT
WESTERN LARCH	3.7 PERCENT
PONDEROSA PINE	26.2 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 156.8 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CONTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	6.5 12.9 2.9	6.4 -3.6	97.7 -55.0			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	14.8 20.8 18.4	6.0 3.6	40.7 24.1			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	5.0 5.3 5.7	0.2 0.6	4.8 12.8			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	512 667 359	-155 -152	30.3 -29.8			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	715 878 780	163 65	22.8 9.1			
		FIRST TWO YEARS	SECCND TWO YEARS				
		RESPONSE		RESPONSE			
	TRT	INC	DIFF	%	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	0.7 5.7 -1.5	5.0 -2.2	714.3 -312	5.8 7.2 4.4	-1.4 -1.3	24.5 -23.3
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CCN 200 400	7.3 10.5 9.2	3.2 1.9	43.9 26.0	7.5 10.3 9.2	2.8 1.7	37.8 22.3

INSTALLATION 208
 REGION: NORTHERN IDAHO
 LEGAL DESCRIPTION: T46N R5W SECTION 25 OWNERSHIP: PCTLATCH MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	2800 FEET
SLOPE	15 PERCENT
DOUGLAS-FIR SITE INDEX	67.8 FEET AT 50 YEARS
VEGETATION SERIES	GRAND FIR
PARENT MATERIAL	ASH AND/OR LOESS
ASH DEPTH	TRACE
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	1617 PPM
TOTAL PHOSPHORUS	384 PPM
CARBON	1.87 PERCENT
MINERALIZABLE NITROGEN	57.8 PPM
COARSE FRAGMENTS	12.6 PERCENT
CORRECTED MINERALIZABLE N	49.5 PPM

STAND CHARACTERISTICS:

INITIAL AGE	88 YEARS
INITIAL TREES PER ACRE	150 TREES/ACRE
INITIAL BASAL AREA	188.7 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	6549 CU.FEET/ACRE
RELATIVE DENSITY INDEX	48.2
MEAN DIAMETER	15.5 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	96.5 PERCENT
GRAND FIR	0.9 PERCENT
PONDEROSA PINE	2.6 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 188.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	12.4		
	200 # N	15.4	2.9	23.4
	400 # N	10.7	-1.8	-14.1
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	13.3		
	200 # N	15.4	2.1	15.6
	400 # N	12.6	-0.7	-4.9
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	2.4		
	200 # N	2.9	0.5	18.8
	400 # N	2.5	0.1	4.6
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	586		
	200 # N	723	138	23.5
	400 # N	545	-41	-7.0
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	622		
	200 # N	723	102	16.3
	400 # N	599	-23	-3.7

	TRT	FIRST TWO YEARS				SECOND TWO YEARS			
		RESPONSE				RESPONSE			
		INC	DIFF	%		INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	6.6							
	200	8.2	1.5	22.9	5.7	7.2	1.5	25.5	
	400	6.8	0.1	2.3	3.9	-1.8	-32.1		
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	7.0							
	200	8.2	1.2	16.9	6.3	7.2	0.9	14.3	
	400	6.8	-0.2	-2.7	5.8	-0.5	-7.2		

INSTALLATION 209
 REGION: NORTHEAST WASHINGTON CWNEESHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T34N R38E SECTION 27 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	2800 FEET
SLOPE	28 PERCENT
DOUGLAS-FIR SITE INDEX	69.8 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	GLACIAL TILL
ASH DEPTH	SHALLOW (< 3 IN)
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	1811 PPM
TOTAL PHOSPHORUS	1954 PPM
CARBON	1.40 PERCENT
MINERALIZABLE NITROGEN	30.0 PPM
COARSE FRAGMENTS	18.0 PERCENT
CORRECTED MINERALIZABLE N	24.7 PPM

STAND CHARACTERISTICS:

INITIAL AGE	68 YEARS
INITIAL TREES PER ACRE	182 TREES/ACRE
INITIAL BASAL AREA	143.1 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	4415 CU.FEET/ACRE
RELATIVE DENSITY INDEX	41.2
MEAN DIAMETER	12.1 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	99.0 PERCENT
WESTERN LARCH	1.0 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 143.1 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE		
			DIFFERENCE	% OF CONTROL	
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	10.4			
	200 # N	17.7	7.4	71.3	
	400 # N	18.0	7.6	73.4	
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	13.7			
	200 # N	17.7	4.0	29.1	
	400 # N	18.0	4.2	30.7	
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	4.5			
	200 # N	5.5	1.0	23.0	
	400 # N	5.3	0.8	18.2	
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	526			
	200 # N	845	319	60.7	
	400 # N	806	280	53.2	
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	627			
	200 # N	845	218	34.8	
	400 # N	806	179	28.5	
			FIRST TWO YEARS	SECOND TWO YEARS	
			RESPONSE		
	TRT	INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	6.3			
	200	8.9	2.6	42.0	
	400	8.2	1.9	29.7	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	6.4			
	200	8.9	2.6	40.4	
	400	8.2	1.8	28.3	
			INC	DIFF	%
			4.0		
			8.8	4.8	117.7
			9.8	5.7	142.0
			7.4		
			8.8	1.4	19.5
			9.8	2.4	32.9

INSTALLATION 210
 REGION: NORTHEAST WASHINGTON OWNERSHIP: INLAND EMPIRE
 LEGAL DESCRIPTION: T31N R43E SECTION 26 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	2600 FEET
SLOPE	28 PERCENT
DOUGLAS-FIR SITE INDEX	73.7 FEET AT 50 YEARS
VEGETATION SERIES	DOUGLAS-FIR
PARENT MATERIAL	GRANITE
ASH DEPTH	SHALLOW (< 3 IN)
SOIL DEPTH	MCDERATE (12 TO 24 IN)
TOTAL NITROGEN	3894 PPM
TOTAL PHOSPHORUS	2101 PPM
CARBON	2.65 PERCENT
MINERALIZABLE NITROGEN	34.0 PPM
COARSE FRAGMENTS	22.5 PERCENT
CORRECTED MINERALIZABLE N	26.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	54 YEARS
INITIAL TREES PER ACRE	272 TREES/ACRE
INITIAL BASAL AREA	143.3 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	3468 CU.FEET/ACRE
RELATIVE DENSITY INDEX	45.7
MEAN DIAMETER	9.9 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	84.1 PERCENT
WESTERN LARCH	1.3 PERCENT
LODGEPOLE PINE	3.1 PERCENT
PONDEROSA PINE	11.5 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 143.3 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	12.9		
	200 # N	9.3	-3.6	-27.7
	400 # N	1.5	-11.4	-88.6
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	13.7		
	200 # N	16.6	3.0	21.6
	400 # N	15.3	1.6	11.7
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	4.6		
	200 # N	4.8	0.2	4.4
	400 # N	4.7	0.2	3.6
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	576		
	200 # N	513	-63	-10.9
	400 # N	297	-280	-48.5
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	592		
	200 # N	662	70	11.8
	400 # N	641	49	8.3

	TRT	FIRST TWO YEARS				SECOND TWO YEARS		
		RESPONSE		RESPONSE				
		INC	DIFF	%	INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	5.4						
	200	8.5	3.1	56.7	7.4	0.7	-90.1	
	400	6.8	1.4	26.0	-5.3	-12.8	-172	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	6.1						
	200	8.5	2.3	38.1	7.6	8.2	8.4	
	400	8.3	2.2	35.7	7.0	-0.6	-7.5	

INSTALLATION 211
 REGION: NORTHEAST WASHINGTON CWNEESHIP: INLAND EMPIRE
 LEGAL DESCRIPTION: T31N R43E SECTION 20 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3100 FEET
SLOPE	37 PERCENT
DOUGLAS-FIR SITE INDEX	88.7 FEET AT 50 YEARS
VEGETATION SERIES	GRAND FIR
PARENT MATERIAL	GLACIAL TILL
ASH DEPTH	SHALLOW (< 3 IN)
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	2613 PPM
TOTAL PHOSPHORUS	938 PPM
CARBON	1.55 PERCENT
MINERALIZABLE NITROGEN	30.7 PPM
COARSE FRAGMENTS	12.5 PERCENT
CORRECTED MINERALIZABLE N	26.5 PPM

STAND CHARACTERISTICS:

INITIAL AGE	34 YEARS
INITIAL TREES PER ACRE	472 TREES/ACRE
INITIAL BASAL AREA	172.0 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	3786 CU.FEET/ACRE
RELATIVE DENSITY INDEX	60.1
MEAN DIAMETER	8.2 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	94.4 PERCENT
GRAND FIR	0.4 PERCENT
WESTERN LARCH	0.3 PERCENT
LODGEPOLE PINE	0.2 PERCENT
WHITE PINE	0.5 PERCENT
PONDEROSA PINE	4.1 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 172.0 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CCNTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CCNTROL 200 # N 400 # N	28.6 30.8 6.8	-2.3 -21.8	7.9 -76.3			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CCNTROL 200 # N 400 # N	29.1 34.5 35.0	5.5 5.9	18.8 20.3			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CCNTROL 200 # N 400 # N	4.8 5.4 5.8	0.6 1.0	12.0 20.7			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL 200 # N 400 # N	961 1098 513	137 -448	14.3 -46.6			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL 200 # N 400 # N	968 1163 1139	195 171	20.1 17.6			
		FIRST TWO YEARS	SECOND TWO YEARS				
		RESPONSE		RESPONSE			
	TRT	INC	DIFF	%	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	14.9			13.7		
	200	17.9	3.0	20.2	12.9	-0.7	-5.4
	400	15.1	0.3	1.7	-8.4	-22.1	-16.1
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CCN	14.9			14.2		
	200	17.9	3.0	20.2	16.6	2.5	17.3
	400	19.1	4.2	28.3	15.9	1.7	11.9

INSTALLATION 212
 REGION: NORTHEAST OREGON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T1N R45E SECTION 5 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	4100 FEET
SLOPE	51 PERCENT
DOUGLAS-FIR SITE INDEX	55.2 FEET AT 50 YEARS
VEGETATION SERIES	GRAND FIR
PARENT MATERIAL	BASALT
ASH DEPTH	NCNE
SOIL DEPTH	SHALLOW (< 12 IN)
TOTAL NITROGEN	2932 PPM
TOTAL PHOSPHORUS	623 PPM
CARBON	2.46 PERCENT
MINERALIZABLE NITROGEN	55.5 PPM
COARSE FRAGMENTS	29.2 PERCENT
CORRECTED MINERALIZABLE N	39.3 PPM

STAND CHARACTERISTICS:

INITIAL AGE	71 YEARS
INITIAL TREES PER ACRE	197 TREES/ACRE
INITIAL BASAL AREA	81.1 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	1864 CU.FEET/ACRE
RELATIVE DENSITY INDEX	27.4
MEAN DIAMETER	8.7 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	96.3 PERCENT
WESTERN LARCH	2.5 PERCENT
PONDEROSA PINE	1.2 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 81.1 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CCNTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CCNTROL 200 # N 400 # N	11.0 14.8 13.3		
			3.9 2.3	35.1 20.7
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CCNTROL 200 # N 400 # N	11.0 14.8 13.3		
			3.9 2.3	35.1 20.7
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CCNTROL 200 # N 400 # N	4.2 4.5 4.5		
			0.3 0.3	6.9 6.2
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL 200 # N 400 # N	379 463 440		
			83 61	21.9 16.1
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	379 463 440		
			83 61	21.9 16.1

	TRT	FIRST TWO YEARS				SECOND TWO YEARS			
		INC	RESPONSE		INC	RESPONSE			
			DIFF	%		DIFF	%		
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	5.7 8.3 7.6							
			2.6 1.9	46.9 33.8	5.3 6.5 5.7		1.2 0.3	22.3 6.3	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	5.7 8.3 7.6							
			2.7 1.9	46.9 34.0	5.3 6.5 5.7		1.2 0.3	22.3 6.3	

INSTALLATION 213
 REGION: NORTHEAST OREGON CWNEESHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T2S R35E SECTION 3 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	4250 FEET
SLOPE	3 PERCENT
DOUGLAS-FIR SITE INDEX	63.0 FEET AT 50 YEARS
VEGETATION SERIES	GRAND FIR
PARENT MATERIAL	ASH AND/OR LOESS
ASH DEPTH	DEEP { > 12 IN }
SOIL DEPTH	DEEP { > 24 IN }
TOTAL NITROGEN	1470 PPM
TOTAL PHOSPHORUS	1518 PPM
CARBON	1.46 PERCENT
MINERALIZABLE NITROGEN	22.2 PPM
COARSE FRAGMENTS	12.2 PERCENT
CORRECTED MINERALIZABLE N	19.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	122 YEARS
INITIAL TREES PER ACRE	122 TREES/ACRE
INITIAL BASAL AREA	95.5 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2959 CU.FEET/ACRE
RELATIVE DENSITY INDEX	27.5
MEAN DIAMETER	12.1 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	27.7 PERCENT
GRAND FIR	21.6 PERCENT
WESTERN LARCH	47.5 PERCENT
ENGELMANN SPRUCE	3.3 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 95.5 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CONTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	1.2 -2.0 6.0	-3.2 4.8	-268 396.4			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	8.0 11.3 13.0	3.3 5.0	40.6 62.0			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	2.7 2.7 3.6	0.0 1.0	1.7 36.9			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	138 -4 279	-142 140	-103 101.4			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	341 416 490	75 149	21.9 43.8			
		FIRST TWO YEARS	SECOND TWO YEARS				
		RESPONSE	RESPONSE				
	TRT	INC	DIFF	%	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	3.9 5.5 6.9	1.6 3.0	41.0 76.0	-2.7 -7.6 -0.9	-4.8 1.8	175.2 -67.0
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	3.9 5.5 6.9	1.6 3.0	41.5 77.0	4.1 5.7 6.0	1.6 1.9	38.7 46.1

INSTALLATION 215
 REGION: NORTHEAST WASHINGTON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T39N R37E SECTION 25 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3400 FEET
SLOPE	27 PERCENT
DOUGLAS-FIR SITE INDEX	67.9 FEET AT 50 YEARS
VEGETATION SERIES	GRAND FIR
PARENT MATERIAL	GLACIAL TILL
ASH DEPTH	SHALLOW (< 3 IN)
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	2419 PPM
TOTAL PHOSPHORUS	893 PPM
CARBON	1.51 PERCENT
MINERALIZABLE NITROGEN	52.7 PPM
COARSE FRAGMENTS	36.2 PERCENT
CORRECTED MINERALIZABLE N	33.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	51 YEARS
INITIAL TREES PER ACRE	213 TREES/ACRE
INITIAL BASAL AREA	73.1 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	1522 CU.FEET/ACRE
RELATIVE DENSITY INDEX	25.9
MEAN DIAMETER	8.0 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	100.0 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 73.1 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CONTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	21.2					
	200 # N	27.3	6.1	28.7			
	400 # N	24.4	3.2	15.0			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	21.2					
	200 # N	27.3	6.1	28.7			
	400 # N	24.4	3.2	15.0			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	6.0					
	200 # N	6.4	0.5	7.7			
	400 # N	6.8	0.8	13.9			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	592					
	200 # N	743	151	25.4			
	400 # N	720	128	21.5			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	592					
	200 # N	744	152	25.6			
	400 # N	720	128	21.5			
			FIRST TWO YEARS		SECOND TWO YEARS		
			RESPONSE				
	TRT	INC	DIFF	%	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	10.5			10.7		
	200	14.1	3.6	33.8	13.2	2.6	24.2
	400	12.1	1.6	14.8	12.4	1.7	15.9
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	10.6			10.7		
	200	14.1	3.5	33.4	13.3	2.6	24.4
	400	12.1	1.5	14.4	12.4	1.7	15.9

INSTALLATION 218
 REGION: NORTHEAST WASHINGTON OWNERSHIP: BCISE CASCADE
 LEGAL DESCRIPTION: T39N R34E SECTION 13 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3000 FEET
SLOPE	19 PERCENT
DOUGLAS-FIR SITE INDEX	48.3 FEET AT 50 YEARS
VEGETATION SERIES	DOUGLAS-FIR
PARENT MATERIAL	GLACIAL TILL
ASH DEPTH	NCNE
SOIL DEPTH	MODERATE (12 TO 24 IN)
TOTAL NITROGEN	1572 PPM
TOTAL PHOSPHORUS	664 PPM
CARBON	1.23 PERCENT
MINERALIZABLE NITROGEN	36.3 PPM
COARSE FRAGMENTS	16.6 PERCENT
CORRECTED MINERALIZABLE N	30.0 PPM

STAND CHARACTERISTICS:

INITIAL AGE	100 YEARS
INITIAL TREES PER ACRE	152 TREES/ACRE
INITIAL BASAL AREA	94.7 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2247 CU.FEET/ACRE
RELATIVE DENSITY INDEX	28.9
MEAN DIAMETER	10.7 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	98.5 PERCENT
WESTERN LARCH	1.5 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 94.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	18.2		
	200 # N	17.2	-1.0	-5.4
	400 # N	19.8	1.6	8.9
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	18.2		
	200 # N	17.2	-1.0	-5.4
	400 # N	19.8	1.6	9.0
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	3.6		
	200 # N	3.4	-0.2	-5.6
	400 # N	4.0	0.4	10.4
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	533		
	200 # N	522	-11	-2.0
	400 # N	619	86	16.1
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	533		
	200 # N	522	-11	-2.0
	400 # N	619	86	16.1

	TRT	FIRST TWO YEARS				SECOND TWO YEARS		
		RESPONSE				RESPONSE		
		INC	DIFF	%		INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	9.6						
	200	9.2	-0.4	-4.2	8.7	-0.6	-6.8	
	400	10.5	0.9	9.5	8.1	0.6	7.4	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	9.6						
	200	9.2	-0.4	-4.2	8.7	-0.6	-6.8	
	400	10.5	1.0	10.1	8.1	0.6	7.4	

INSTALLATION 219
 REGION: CENTRAL IDAHO OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T18N R1E SECTION 13 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 4600 FEET
 SLOPE 23 PERCENT
 DOUGLAS-FIR SITE INDEX 55.8 FEET AT 50 YEARS
 VEGETATION SERIES DOUGLAS-FIR
 PARENT MATERIAL BASALT
 ASH DEPTH NCNE
 SOIL DEPTH MODERATE (12 TO 24 IN)
 TOTAL NITROGEN 3545 PPM
 TOTAL PHOSPHORUS 1059 PPM
 CARBON 2.78 PERCENT
 MINERALIZABLE NITROGEN 57.7 PPM
 COARSE FRAGMENTS 11.8 PERCENT
 CORRECTED MINERALIZABLE N 50.8 PPM

STAND CHARACTERISTICS:

INITIAL AGE 67 YEARS
 INITIAL TREES PER ACRE 243 TREES/ACRE
 INITIAL BASAL AREA 128.2 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 2920 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 40.8
 MEAN DIAMETER 9.9 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 74.0 PERCENT
 PONDEROSA PINE 26.0 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 128.2 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CONTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	15.7					
	200 # N	20.4	4.7	30.2			
	400 # N	22.8	7.1	45.6			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	15.7					
	200 # N	20.4	4.7	30.0			
	400 # N	22.8	7.1	45.2			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	3.6					
	200 # N	4.6	1.0	28.3			
	400 # N	3.7	0.1	2.2			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	548					
	200 # N	691	144	26.2			
	400 # N	730	182	33.3			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	548					
	200 # N	691	144	26.2			
	400 # N	730	182	33.3			
			FIRST TWO YEARS		SECOND TWO YEARS		
			RESPONSE				
	TRT	INC	DIFF	%	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	7.8			7.8		
	200	10.8	3.0	38.9	9.5	1.7	21.9
	400	12.3	4.5	58.1	10.5	2.7	34.2
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	7.8			7.8		
	200	10.8	3.0	38.2	9.5	1.7	21.9
	400	12.3	4.5	56.9	10.5	2.7	34.2

INSTALLATION 221
 REGION: CENTRAL IDAHO OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T20N R1E SECTION 33 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	4200 FEET
SLOPE	39 PERCENT
DOUGLAS-FIR SITE INDEX	54.8 FEET AT 50 YEARS
VEGETATION SERIES	GFAND FIR
PARENT MATERIAL	BASALT
ASH DEPTH	NCNE
SOIL DEPTH	MODERATE (12 TO 24 IN)
TOTAL NITROGEN	3582 PPM
TOTAL PHOSPHORUS	1319 PPM
CARBON	2.40 PERCENT
MINERALIZABLE NITROGEN	55.8 PPM
COARSE FRAGMENTS	15.4 PERCENT
CORRECTED MINERALIZABLE N	47.3 PPM

STAND CHARACTERISTICS:

INITIAL AGE	82 YEARS
INITIAL TREES PER ACRE	180 TREES/ACRE
INITIAL BASAL AREA	118.1 SQ-FEET/ACRE
INITIAL TOTAL VOLUME	2918 CU-FEET/ACRE
RELATIVE DENSITY INDEX	35.5
MEAN DIAMETER	11.0 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	88.6 PERCENT
GRAND FIR	1.5 PERCENT
WESTERN LARCH	2.1 PERCENT
LODGEPOLE PINE	0.9 PERCENT
PONDEROSA PINE	6.4 PERCENT
ENGELMANN SPRUCE	0.5 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 118.1 SQ-FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ. FEET/ACRE)	CONTROL	9.9		
	200 # N	17.3	7.4	75.0
	400 # N	14.3	4.4	44.7
FOUR-YEAR GROSS BASAL AREA (SQ. FEET/ACRE)	CONTROL	11.3		
	200 # N	17.4	6.1	53.4
	400 # N	14.5	3.1	27.7
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	2.7		
	200 # N	3.6	0.9	34.3
	400 # N	3.0	0.3	11.7
FOUR-YEAR NET TOTAL VOLUME (CU. FEET/ACRE)	CONTROL	369		
	200 # N	551	182	49.4
	400 # N	480	111	30.1
FOUR-YEAR GROSS TOTAL VOLUME (CU. FEET/ACRE)	CONTROL	389		
	200 # N	554	166	42.6
	400 # N	485	96	24.8
			FIRST TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ. FEET/ACRE)	CCN	3.7		
	200	8.9	5.2	142.7
	400	7.0	3.3	90.9
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ. FEET/ACRE)	CCN	5.4		
	200	9.0	3.6	65.5
	400	7.2	1.7	31.6
			SECOND TWO YEARS	
			RESPONSE	
			INC	DIFF
			---	---
			---	---

INSTALLATION 222
 REGION: CENTRAL IDAHO CWNEESHIP: IDL
 LEGAL DESCRIPTION: T18N R3W SECTION 36 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 4800 FEET
 SLOPE 27 PERCENT
 DOUGLAS-FIR SITE INDEX 53.3 FEET AT 50 YEARS
 VEGETATION SERIES DOUGLAS-FIR
 PARENT MATERIAL BASALT
 ASH DEPTH NCNE
 SOIL DEPTH MODERATE (12 TO 24 IN)
 TOTAL NITROGEN 2676 PPM
 TOTAL PHOSPHORUS 1098 PPM
 CARBON 1.51 PERCENT
 MINERALIZABLE NITROGEN 43.0 PPM
 COARSE FRAGMENTS 16.5 PERCENT
 CORRECTED MINERALIZABLE N 35.0 PPM

STAND CHARACTERISTICS:

INITIAL AGE 71 YEARS
 INITIAL TREES PER ACRE 355 TREES/ACRE
 INITIAL BASAL AREA 138.6 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 3142 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 47.4
 MEAN DIAMETER 8.7 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 90.7 PERCENT
 GRAND FIR 0.1 PERCENT
 PONDEROSA PINE 9.2 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 138.6 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE		
			DIFFERENCE	% OF CONTROL	
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	19.0 17.2 20.7	-1.8 1.7	-9.4 8.8	
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	19.0 17.5 20.7	-1.5 1.7	-7.8 8.8	
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	3.3 3.1 2.9	-0.2 -0.4	-6.5 -11.3	
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	600 542 638	-57 38	-9.5 6.3	
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	600 554 638	-46 38	-7.6 6.3	
		FIRST TWO YEARS	SECOND TWO YEARS		
		RESPONSE	RESPONSE		
	TRT	INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	9.2 9.3 11.0	0.0 1.8	0.4 19.3	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	9.2 9.4 11.0	0.2 1.8	2.2 19.3	
			INC	DIFF	%
			9.8 7.9 9.7	-1.9 -0.1	-19.2 -1.0
			9.8 8.1 9.7	-1.7 -0.1	-17.5 -1.0

INSTALLATION 223
 REGION: CENTRAL IDAHO OWNERSHIP: IDL
 LEGAL DESCRIPTION: T18N R3W SECTION 36 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 4400 FEET
 SLOPE 35 PERCENT
 DOUGLAS-FIR SITE INDEX 55.1 FEET AT 50 YEARS
 VEGETATION SERIES GRAND FIR
 PARENT MATERIAL BASALT
 ASH DEPTH NCNE
 SOIL DEPTH MCDEBATE (12 TO 24 IN)
 TOTAL NITROGEN 2124 PPM
 TOTAL PHOSPHORUS 948 PPM
 CARBON 1.70 PERCENT
 MINERALIZABLE NITROGEN 35.3 PPM
 COARSE FRAGMENTS 14.6 PERCENT
 CORRECTED MINERALIZABLE N 30.0 PPM

STAND CHARACTERISTICS:

INITIAL AGE 75 YEARS
 INITIAL TREES PER ACRE 225 TREES/ACRE
 INITIAL BASAL AREA 111.3 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 2708 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 35.9
 MEAN DIAMETER 9.6 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 82.5 PERCENT
 GRAND FIR 0.8 PERCENT
 PONDEROSA PINE 16.7 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 111.3 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CONTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	14.3 23.6 19.1	9.3 4.8	64.7 33.2			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	14.3 23.6 19.1	9.3 4.8	64.9 33.5			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	3.4 4.6 4.3	1.2 0.9	34.3 25.0			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	477 772 680	295 202	61.8 42.4			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	477 772 680	295 203	61.8 42.5			
		FIRST TWO YEARS	SECOND TWO YEARS				
		RESPONSE		RESPONSE			
	TRT	INC	DIFF	%	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CCN 200 400	7.0 12.4 10.4	5.4 3.3	76.9 47.6	7.3 11.2 8.7	3.8 1.4	52.2 19.0
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	7.0 12.5 10.4	5.4 3.4	77.6 48.1	7.3 11.2 8.7	3.8 1.4	52.2 19.0

INSTALLATION 224
 REGION: CENTRAL WASHINGTON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T6N R15E SECTION 20 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3800 FEET
SLOPE	3 PERCENT
DOUGLAS-FIR SITE INDEX	91.0 FEET AT 50 YEARS
VEGETATION SERIES	GRAND FIR
PARENT MATERIAL	BASALT
ASH DEPTH	NCNE
SOIL DEPTH	SHALLOW (< 12 IN)
TOTAL NITROGEN	2618 PPM
TOTAL PHOSPHORUS	945 PPM
CARBON	2.49 PERCENT
MINERALIZABLE NITROGEN	35.2 PPM
COARSE FRAGMENTS	14.1 PERCENT
CORRECTED MINERALIZABLE N	30.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	74 YEARS
INITIAL TREES PER ACRE	103 TREES/ACRE
INITIAL BASAL AREA	155.3 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	5852 CU.FEET/ACRE
RELATIVE DENSITY INDEX	38.0
MEAN DIAMETER	16.7 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	93.4 PERCENT
GRAND FIR	6.6 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 155.3 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CONTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	15.8 25.0 23.1	9.2 7.4	58.7 46.7			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	17.6 25.3 23.2	7.6 5.5	43.1 31.2			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	2.9 4.1 3.4	1.1 0.4	37.9 14.3			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	745 1094 1056	349 310	46.8 41.6			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	799 1094 1056	295 257	37.0 32.2			
		FIRST TWO YEARS	SECOND TWO YEARS				
		RESPONSE		RESPONSE			
	TBT	INC	DIFF	%	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	6.7 12.5 11.5	5.8 4.8	85.9 72.2	9.0 12.4 11.6	3.4 2.6	37.2 28.5
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	8.4 12.5 11.6	4.0 3.1	48.0 37.4	9.2 12.8 11.6	3.6 2.4	39.0 25.8

INSTALLATION 225
 REGION: CENTRAL WASHINGTON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T5N R15E SECTION 18 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	2200 FEET
SLOPE	0 PERCENT
DOUGLAS-FIR SITE INDEX	54.7 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	BASALT
ASH DEPTH	NCNE
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	1660 PPM
TOTAL PHOSPHORUS	715 PPM
CARBON	1.42 PERCENT
MINERALIZABLE NITROGEN	19.8 PPM
COARSE FRAGMENTS	13.1 PERCENT
CORRECTED MINERALIZABLE N	17.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	85 YEARS
INITIAL TREES PER ACRE	160 TREES/ACRE
INITIAL BASAL AREA	109.8 SQ-FEET/ACRE
INITIAL TOTAL VOLUME	2817 CU-FEET/ACRE
RELATIVE DENSITY INDEX	32.7
MEAN DIAMETER	11.1 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	99.4 PERCENT
PONDEROSA PINE	0.6 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 109.8 SQ-FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE		
			DIFFERENCE	% OF CONTROL	
FOUR-YEAR NET BASAL AREA (SQ-FEET/ACRE)	CONTROL	18.1			
	200 # N	22.7	4.6	25.5	
	400 # N	29.4	11.3	62.7	
FOUR-YEAR GROSS BASAL AREA (SQ-FEET/ACRE)	CONTROL	18.1			
	200 # N	22.7	4.6	25.2	
	400 # N	29.5	11.3	62.7	
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	4.1			
	200 # N	5.5	1.4	33.9	
	400 # N	6.9	2.8	68.1	
FOUR-YEAR NET TOTAL VOLUME (CU-FEET/ACRE)	CONTROL	628			
	200 # N	766	138	22.0	
	400 # N	1034	407	64.8	
FOUR-YEAR GROSS TOTAL VOLUME (CU-FEET/ACRE)	CONTROL	628			
	200 # N	766	138	21.9	
	400 # N	1035	407	64.8	
			FIRST TWO YEARS	SECOND TWO YEARS	
			RESPONSE		
	TRT	INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ-FEET/ACRE)	CON	8.5			
	200	10.7	2.1	24.9	
	400	14.6	6.0	70.8	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ-FEET/ACRE)	CON	8.6			
	200	10.7	2.1	24.1	
	400	14.7	6.1	70.6	
			INC	DIFF	%
			9.5		
			12.0	2.5	26.7
			14.8	5.3	55.5
			9.5		
			12.0	2.5	26.7
			14.8	5.3	55.5

INSTALLATION 226
 REGION: CENTRAL WASHINGTON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T16N R15E SECTION 16 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	2900 FEET
SLOPE	9 PERCENT
DOUGLAS-FIR SITE INDEX	57.0 FEET AT 50 YEARS
VEGETATION SERIES	DOUGLAS-FIR
PARENT MATERIAL	BASALT
ASH DEPTH	NCNE
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	1366 PPM
TOTAL PHOSPHORUS	341 PPM
CARBON	1.07 PERCENT
MINERALIZABLE NITROGEN	17.2 PPM
COARSE FRAGMENTS	5.6 PERCENT
CORRECTED MINERALIZABLE N	16.0 PPM

STAND CHARACTERISTICS:

INITIAL AGE	79 YEARS
INITIAL TREES PER ACRE	132 TREES/ACRE
INITIAL BASAL AREA	88.1 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2045 CU.FEET/ACRE
RELATIVE DENSITY INDEX	26.4
MEAN DIAMETER	11.1 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	99.1 PERCENT
PONDEROSA PINE	0.9 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 88.1 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	12.0		
	200 # N	17.1	5.1	42.5
	400 # N	20.2	8.2	68.4
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	12.0		
	200 # N	17.1	5.1	42.5
	400 # N	20.2	8.2	68.4
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	4.2		
	200 # N	5.0	0.9	21.1
	400 # N	6.1	2.0	47.6
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	404		
	200 # N	550	146	36.1
	400 # N	647	243	60.2
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	404		
	200 # N	550	146	36.2
	400 # N	647	243	60.2

	TRT	FIRST TWO YEARS				SECOND TWO YEARS		
		INC	RESPONSE		INC	RESPONSE		
			DIFF	%		DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	6.0			6.0			
	200	9.0	3.0	50.5	8.0	2.0	34.2	
	400	10.4	4.4	72.8	9.7	3.7	62.0	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	6.0			6.0			
	200	9.0	3.0	50.5	8.0	2.0	34.1	
	400	10.4	4.4	73.9	9.7	3.7	61.8	

INSTALLATION 227
 REGION: CENTRAL WASHINGTON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T16N R15E SECTION 20 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	2400 FEET
SLOPE	33 PERCENT
DOUGLAS-FIR SITE INDEX	55.7 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	BASALT
ASH DEPTH	TRACE
SOIL DEPTH	MCDEBATE (12 TO 24 IN)
TOTAL NITROGEN	1385 PPM
TOTAL PHOSPHORUS	209 PPM
CARBON	1.41 PERCENT
MINERALIZABLE NITROGEN	24.7 PPM
COARSE FRAGMENTS	15.6 PERCENT
CORRECTED MINERALIZABLE N	20.8 PPM

STAND CHARACTERISTICS:

INITIAL AGE	80 YEARS
INITIAL TREES PER ACRE	123 TREES/ACRE
INITIAL BASAL AREA	101.6 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2680 CU.FEET/ACRE
RELATIVE DENSITY INDEX	28.9
MEAN DIAMETER	12.3 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	98.1 PERCENT
PONDEROSA PINE	1.9 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 101.6 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	11.9		
	200 # N	17.0	5.2	43.6
	400 # N	15.5	3.6	30.7
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	11.9		
	200 # N	17.0	5.1	42.8
	400 # N	15.5	3.6	30.0
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	4.5		
	200 # N	6.1	1.6	34.9
	400 # N	5.8	1.3	29.8
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	475		
	200 # N	689	214	45.0
	400 # N	630	155	32.6
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	475		
	200 # N	689	214	45.0
	400 # N	630	155	32.6
			FIRST TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	5.3		
	200	8.9	3.6	67.9
	400	7.8	2.5	46.5
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	5.4		
	200	8.9	3.5	63.6
	400	7.8	2.3	42.7
			SECOND TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	6.4		
	200	8.1	1.7	26.8
	400	7.7	1.3	20.4
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	6.4		
	200	8.1	1.7	26.8
	400	7.7	1.3	20.4

INSTALLATION 228
 REGION: CENTRAL WASHINGTON CWNEESHIP: WASHINGTON DNR
 LEGAL DESCRIPTION: T20N R16E SECTION 36 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 2500 FEET
 SLOPE 28 PERCENT
 DOUGLAS-FIR SITE INDEX 76.9 FEET AT 50 YEARS
 VEGETATION SERIES DCUGLAS-FIR
 PARENT MATERIAL ASH AND/OR LOESS
 ASH DEPTH NCNE
 SOIL DEPTH MODERATE (12 TO 24 IN)
 TOTAL NITROGEN 1195 PPM
 TOTAL PHOSPHORUS 255 PPM
 CARBON 1.24 PERCENT
 MINERALIZABLE NITROGEN 28.8 PPM
 COARSE FRAGMENTS 11.3 PERCENT
 CORRECTED MINERALIZABLE N 25.3 PPM

STAND CHARACTERISTICS:

INITIAL AGE 64 YEARS
 INITIAL TREES PER ACRE 212 TREES/ACRE
 INITIAL BASAL AREA 140.4 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 3922 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 42.1
 MEAN DIAMETER 11.2 INCHES
 SPECIES COMPOSITION (% OF TOTAL EA)
 DOUGLAS-FIR 89.1 PERCENT
 PONDEROSA PINE 10.9 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 140.4 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CCNTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CCNTROL	15.6		
	200 # N	13.0	-2.6	-16.9
	400 # N	20.1	4.6	29.2
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CCNTROL	15.6		
	200 # N	16.5	0.9	5.7
	400 # N	20.1	4.6	29.2
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CCNTROL	5.2		
	200 # N	4.8	-0.5	-9.0
	400 # N	5.3	0.0	0.5
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL	729		
	200 # N	640	-89	-12.1
	400 # N	832	103	14.2
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL	729		
	200 # N	716	-13	-1.7
	400 # N	832	103	14.2
			FIRST TWO YEARS	
			RESPONSE	
	TBT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	6.9		
	200	6.0	-0.9	-12.4
	400	9.1	2.2	32.1
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	6.9		
	200	7.5	0.6	9.3
	400	9.1	2.2	32.1
			SECCND TWO YEARS	
			RESPONSE	
	TBT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	6.9		
	200	6.0	-0.9	-12.4
	400	9.1	2.2	32.1
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	6.9		
	200	7.5	0.6	9.3
	400	9.1	2.2	32.1

INSTALLATION 229
 REGION: CENTRAL WASHINGTON CWNEESHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T20N R17E SECTION 31 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 3000 FEET
 SLOPE 14 PERCENT
 DOUGLAS-FIR SITE INDEX 79.2 FEET AT 50 YEARS
 VEGETATION SERIES DOUGLAS-FIR
 PARENT MATERIAL BASALT
 ASH DEPTH TRACE
 SOIL DEPTH MODERATE (12 TO 24 IN)
 TOTAL NITROGEN 1698 PPM
 TOTAL PHOSPHORUS 484 PPM
 CARBON 1.53 PERCENT
 MINERALIZABLE NITROGEN 45.3 PPM
 COARSE FRAGMENTS 21.1 PERCENT
 CORRECTED MINERALIZABLE N 35.8 PPM

STAND CHARACTERISTICS:

INITIAL AGE 69 YEARS
 INITIAL TREES PER ACRE 113 TREES/ACRE
 INITIAL BASAL AREA 130.2 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 4127 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 34.1
 MEAN DIAMETER 14.5 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 99.4 PERCENT
 PONDEROSA PINE 0.6 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 130.2 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CCNTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CCNTROL 200 # N 400 # N	16.9 19.1 22.0		
			2.2 5.1	13.1 30.5
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CCNTROL 200 # N 400 # N	16.9 19.1 22.1		
			2.2 5.2	13.0 30.7
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CCNTROL 200 # N 400 # N	4.3 5.5 5.3		
			1.3 1.1	29.7 25.4
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL 200 # N 400 # N	719 858 901		
			139 182	19.3 25.3
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL 200 # N 400 # N	720 858 903		
			139 184	19.3 25.5
			FIRST TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	8.1		
	200	9.1	1.0	12.6
	400	10.1	2.0	25.0
			SECOND TWO YEARS	
			RESPONSE	
	CON	8.8		
	200	10.0	1.2	13.6
	400	11.9	3.1	35.4
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CCN	8.1		
	200	9.1	1.0	12.5
	400	10.1	2.0	25.3
			SECOND TWO YEARS	
			RESPONSE	
	CON	8.8		
	200	10.0	1.2	13.5
	400	12.0	3.1	35.6

INSTALLATION 230
 REGION: CENTRAL WASHINGTON OWNERSHIP: BOISE CASCADE
 LEGAL DESCRIPTION: T21N R15E SECTION 20 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 2900 FEET
 SLOPE 8 PERCENT
 DOUGLAS-FIR SITE INDEX 68.2 FEET AT 50 YEARS
 VEGETATION SERIES GRAND FIR
 PARENT MATERIAL ASH AND/OR LOESS
 ASH DEPTH SHALLOW (< 3 IN)
 SOIL DEPTH DEEP (> 24 IN)
 TOTAL NITROGEN 909 PPM
 TOTAL PHOSPHORUS 554 PPM
 CARBON 1.04 PERCENT
 MINERALIZABLE NITROGEN 23.0 PPM
 COARSE FRAGMENTS 16.4 PERCENT
 CORRECTED MINERALIZABLE N 18.8 PPM

STAND CHARACTERISTICS:

INITIAL AGE 81 YEARS
 INITIAL TREES PER ACRE 128 TREES/ACRE
 INITIAL BASAL AREA 124.2 SQ. FEET/ACRE
 INITIAL TOTAL VOLUME 3961 CU. FEET/ACRE
 RELATIVE DENSITY INDEX 33.9
 MEAN DIAMETER 13.5 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 86.0 PERCENT
 GRAND FIR 2.1 PERCENT
 LODGEPOLE PINE 1.0 PERCENT
 PONDEROSA PINE 10.8 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 124.2 SQ. FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE					
			DIFFERENCE	% OF CONTROL				
FOUR-YEAR NET BASAL AREA (SQ. FEET/ACRE)	CONTROL	11.7						
	200 # N	18.9	7.2	61.7				
	400 # N	23.8	12.1	103.6				
FOUR-YEAR GROSS BASAL AREA (SQ. FEET/ACRE)	CONTROL	11.7						
	200 # N	19.0	7.2	61.8				
	400 # N	23.9	12.2	104.1				
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	3.7						
	200 # N	5.3	1.6	43.2				
	400 # N	5.8	2.1	56.2				
FOUR-YEAR NET TOTAL VOLUME (CU. FEET/ACRE)	CONTROL	536						
	200 # N	860	324	60.3				
	400 # N	1004	468	87.3				
FOUR-YEAR GROSS TOTAL VOLUME (CU. FEET/ACRE)	CONTROL	536						
	200 # N	860	324	60.4				
	400 # N	1007	470	87.6				
	FIRST TWO YEARS				SECOND TWO YEARS			
			RESPONSE				RESPONSE	
	TRT	INC	DIFF	%	INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ. FEET/ACRE)	CON	4.6			7.1			
	200	7.9	3.3	72.4	11.0	3.9	54.5	
	400	9.7	5.1	111.7	14.1	7.0	97.9	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ. FEET/ACRE)	CON	4.6			7.1			
	200	7.9	3.3	72.7	11.0	3.9	54.6	
	400	9.8	5.2	112.6	14.1	7.0	98.3	

INSTALLATION 231
 REGION: MONTANA
 LEGAL DESCRIPTION: T24N R21W SECTION 30 OWNERSHIP: FLATHEAD (BIA) MERIDIAN: PRINCIPAL

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3500 FEET
SLOPE	28 PERCENT
DOUGLAS-FIR SITE INDEX	59.1 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	GLACIAL TILL
ASH DEPTH	NCNE
SOIL DEPTH	MODERATE (12 TO 24 IN)
TOTAL NITROGEN	3916 PPM
TOTAL PHOSPHORUS	754 PPM
CARBON	4.03 PERCENT
MINERALIZABLE NITROGEN	83.7 PPM
COARSE FRAGMENTS	37.5 PERCENT
CORRECTED MINERALIZABLE N	52.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	61 YEARS
INITIAL TREES PER ACRE	168 TREES/ACRE
INITIAL BASAL AREA	97.0 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2247 CU.FEET/ACRE
RELATIVE DENSITY INDEX	30.2
MEAN DIAMETER	10.3 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	95.0 PERCENT
WESTERN LARCH	0.1 PERCENT
PANDEROSA PINE	4.9 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 97.0 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CCNTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CCNTROL 200 # N 400 # N	11.4 14.1 13.5		
			2.8 2.1	24.4 18.7
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CCNTROL 200 # N 400 # N	11.4 14.2 13.5		
			2.8 2.1	24.6 18.7
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CCNTROL 200 # N 400 # N	3.0 2.9 3.4		
			-0.1 0.4	-2.6 12.5
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTRCL 200 # N 400 # N	350 427 422		
			76 72	21.8 20.6
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	350 427 422		
			76 72	21.8 20.6
			FIRST TWO YEARS	
			RESPCNSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	7.1 8.8 8.9		
			1.7 1.8	24.2 26.0
			SECOND TWO YEARS	
			RESPONSE	
	INC	DIFF	%	
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	7.1 8.9 8.9		
			4.3 5.2 4.6	21.8 6.5
			0.9 0.3	21.8 6.5

INSTALLATION 232
 REGION: MONTANA
 LEGAL DESCRIPTION: T23N R21W SECTION 12 OWNERSHIP: FLATHEAD (BIA) MERIDIAN: PRINCIPAL

SITE AND SOIL CHARACTERISTICS:

ELEVATION 3600 FEET
 SLOPE 12 PERCENT
 DOUGLAS-FIR SITE INDEX 79.0 FEET AT 50 YEARS
 VEGETATION SERIES DOUGLAS-FIR
 PARENT MATERIAL GLACIAL TILL
 ASH DEPTH NCNE
 SOIL DEPTH SHALLOW (< 12 IN)
 TOTAL NITROGEN 2747 PPM
 TOTAL PHOSPHORUS 537 PPM
 CARBON 2.70 PERCENT
 MINERALIZABLE NITROGEN 69.3 PPM
 COARSE FRAGMENTS 31.6 PERCENT
 CORRECTED MINERALIZABLE N 48.0 PPM

STAND CHARACTERISTICS:

INITIAL AGE 54 YEARS
 INITIAL TREES PER ACRE 197 TREES/ACRE
 INITIAL BASAL AREA 137.7 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 3678 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 40.9
 MEAN DIAMETER 11.3 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 85.8 PERCENT
 WESTERN LARCH 7.0 PERCENT
 PONDEROSA PINE 7.2 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 137.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CCNTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CCNTROL	16.1		
	200 # N	20.7	4.6	28.4
	400 # N	18.5	2.5	15.2
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CCNTROL	16.3		
	200 # N	20.7	4.4	27.0
	400 # N	20.7	4.5	27.5
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	3.8		
	200 # N	4.9	1.1	28.0
	400 # N	5.3	1.5	38.7
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CCNTROL	605		
	200 # N	805	201	33.2
	400 # N	756	151	25.0
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	611		
	200 # N	805	195	31.9
	400 # N	818	207	33.8
			FIRST TWO YEARS	
			RESPONSE	
	TBT	INC	DIFP	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	10.3		
	200	13.5	3.1	30.4
	400	14.0	3.7	36.1
			SECCND TWO YEARS	
			RESPONSE	
			INC	DIFP
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	10.4		
	200	13.5	3.0	29.1
	400	14.0	3.6	34.7
			5.8	
			7.2	1.4
			6.7	0.9
				23.8
				15.2

INSTALLATION 234

REGION: MONTANA

LEGAL DESCRIPTION: T20N R19W SECTION 5

OWNERSHIP: FLATHEAD (BIA)

MERIDIAN: PRINCIPAL

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3200 FEET
SLOPE	4 PERCENT
DOUGLAS-FIR SITE INDEX	71.7 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	GLACIAL TILL
ASH DEPTH	NCNE
SOIL DEPTH	SHALLOW (< 12 IN)
TOTAL NITROGEN	3115 PPM
TOTAL PHOSPHORUS	272 PPM
CARBON	2.03 PERCENT
MINERALIZABLE NITROGEN	68.0 PPM
COARSE FRAGMENTS	47.2 PERCENT
CORRECTED MINERALIZABLE N	36.0 PPM

STAND CHARACTERISTICS:

INITIAL AGE	59 YEARS
INITIAL TREES PER ACRE	177 TREES/ACRE
INITIAL BASAL AREA	131.5 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	3491 CU.FEET/ACRE
RELATIVE DENSITY INDEX	38.4
MEAN DIAMETER	11.7 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	76.7 PERCENT
GRAND FIR	1.0 PERCENT
WESTERN LARCH	5.1 PERCENT
PONDEROSA PINE	17.3 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 131.5 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	16.6		
	200 # N	15.9	-0.7	-4.4
	400 # N	15.0	-1.6	-9.4
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	16.6		
	200 # N	15.9	-0.7	-4.4
	400 # N	15.4	-1.2	-7.5
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	5.1		
	200 # N	5.2	0.1	2.5
	400 # N	4.7	-0.4	-8.7
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	738		
	200 # N	724	-14	-2.0
	400 # N	650	-88	-11.9
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	738		
	200 # N	724	-14	-2.0
	400 # N	660	-78	-10.6
			FIRST TWO YEARS	
			RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	9.9		
	200	10.2	0.3	3.5
	400	9.3	-0.6	-6.5
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	9.9		
	200	10.2	0.3	3.5
	400	9.5	-0.4	-4.5
			SECOND TWO YEARS	
			RESPONSE	
			INC	DIFF
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	9.9	6.7	
	200	10.2	5.6	-1.1
	400	9.3	5.7	-1.0
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	9.9	6.7	
	200	10.2	5.6	-1.1
	400	9.5	5.9	-0.9

INSTALLATION 235
 REGION: MONTANA OWNERSHIP: CHAMPION
 LEGAL DESCRIPTION: T14N R24W SECTION 5 MERIDIAN: PRINCIPAL

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3200 FEET
SLOPE	15 PERCENT
DOUGLAS-FIR SITE INDEX	49.9 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	ALLUVIUM
ASH DEPTH	NCNE
SOIL DEPTH	MODERATE (12 TO 24 IN)
TOTAL NITROGEN	3872 PPM
TOTAL PHOSPHORUS	951 PPM
CARBON	1.99 PERCENT
MINERALIZABLE NITROGEN	52.3 PPM
COARSE FRAGMENTS	47.3 PERCENT
CORRECTED MINERALIZABLE N	27.0 PPM

STAND CHARACTERISTICS:

INITIAL AGE	74 YEARS
INITIAL TREES PER ACRE	327 TREES/ACRE
INITIAL BASAL AREA	110.3 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	2487 CU.FEET/ACRE
RELATIVE DENSITY INDEX	39.2
MEAN DIAMETER	8.0 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	81.1 PERCENT
WESTERN LARCH	0.3 PERCENT
LODGEPOLE PINE	0.8 PERCENT
PONDEROSA PINE	17.8 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 110.3 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	6.8		
	200 # N	8.4	1.6	23.8
	400 # N	7.0	0.2	3.2
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	8.9		
	200 # N	11.8	2.9	32.7
	400 # N	11.8	2.9	33.2
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	1.9		
	200 # N	3.0	1.1	57.5
	400 # N	2.8	0.9	46.7
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	262		
	200 # N	329	67	25.7
	400 # N	263	1	0.5
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	304		
	200 # N	396	93	30.5
	400 # N	361	58	19.0
			FIRST TWO YEARS	
			RESPONSE	
	TBT	INC	DIFP	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	4.2		
	200	5.9	1.7	39.6
	400	5.5	1.3	30.8
			SECOND TWO YEARS	
			RESPONSE	
			INC	DIFP
				%
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CGN	4.3		
	200	5.9	1.6	37.0
	400	5.5	1.2	28.4

INSTALLATION 236
 REGION: MONTANA OWNERSHIP: CHAMPION
 LEGAL DESCRIPTION: T13N R18W SECTION 20 MERIDIAN: PRINCIPAL

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3500 FEET
SLOPE	35 PERCENT
DOUGLAS-FIR SITE INDEX	54.6 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	VALLEY FILL
ASH DEPTH	NCNE
SOIL DEPTH	SHALLOW (< 12 IN)
TOTAL NITROGEN	4802 PPM
TOTAL PHOSPHORUS	686 PPM
CARBON	4.32 PERCENT
MINERALIZABLE NITROGEN	74.7 PPM
COARSE FRAGMENTS	30.5 PERCENT
CORRECTED MINERALIZABLE N	51.7 PPM

STAND CHARACTERISTICS:

INITIAL AGE	80 YEARS
INITIAL TREES PER ACRE	298 TREES/ACRE
INITIAL BASAL AREA	167.7 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	4296 CU.FEET/ACRE
RELATIVE DENSITY INDEX	52.5
MEAN DIAMETER	10.2 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	95.2 PERCENT
PONDEROSA PINE	4.8 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 167.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CCNTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CCNTRCL 200 # N 400 # N	9.2 9.3 10.0	0.1 0.8	1.1 8.7
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CCNTROL 200 # N 400 # N	9.4 9.3 10.0	-0.1 0.6	-1.2 6.6
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CCNTROL 200 # N 400 # N	2.0 2.2 2.2	0.2 0.3	11.8 12.8
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	384 375 419	-9 35	-2.4 9.2
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	393 375 419	-18 27	-4.6 6.8

	TRT	FIRST TWO YEARS			SECOND TWO YEARS		
		INC	RESPONSE		INC	RESPONSE	
			DIFF	%		DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	5.3 5.4 5.6	0.1 0.3	2.7 5.9	3.9 3.9 4.4	-0.0 0.5	-0.2 12.7
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	5.4 5.4 5.6	0.0 0.3	0.8 4.7	4.0 3.9 4.4	-0.1 0.4	-3.6 9.0

INSTALLATION 237
 REGION: MONTANA OWNERSHIP: CHAMPION
 LEGAL DESCRIPTION: T15N R12W SECTION 9 MERIDIAN: PRINCIPAL

SITE AND SOIL CHARACTERISTICS:

ELEVATION	4400 FEET
SLOPE	1 PERCENT
DOUGLAS-FIR SITE INDEX	56.4 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	GLACIAL TILL
ASH DEPTH	NONE
SOIL DEPTH	MODERATE (12 TO 24 IN)
TOTAL NITROGEN	3586 PPM
TOTAL PHOSPHORUS	558 PPM
CARBON	2.90 PERCENT
MINERALIZABLE NITROGEN	66.2 PPM
COARSE FRAGMENTS	50.0 PERCENT
CORRECTED MINERALIZABLE N	33.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	90 YEARS
INITIAL TREES PER ACRE	232 TREES/ACRE
INITIAL BASAL AREA	148.5 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	4055 CU.FEET/ACRE
RELATIVE DENSITY INDEX	44.9
MEAN DIAMETER	10.9 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	97.3 PERCENT
PONDEROSA PINE	2.7 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 148.5 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	12.6 12.7 8.1		
			0.1 -4.5	0.4 -35.4
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	12.6 13.0 10.8		
			0.4 -1.8	3.0 -14.1
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	1.8 2.3 2.0		
			0.5 0.3	31.1 15.8
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	408 461 323		
			53 -85	13.0 -20.9
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	408 474 411		
			66 3	16.1 0.7
			FIRST TWO YEARS SECOND TWO YEARS	
			RESPONSE RESPONSE	
	TRT	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CCN 200 400	7.5 7.5 3.8	-0.0 -3.7	-0.3 -48.9
			5.1 5.2 4.3	0.0 -0.9 -17.1
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	7.5 7.6 6.6	0.1 -0.9	1.9 -12.3
			5.1 5.3 4.3	0.2 -0.9 -17.1

INSTALLATION 238
 REGION: MONTANA
 LEGAL DESCRIPTION: T22N R26W SECTION 34
 CWNESHIP: CHAMPION
 MERIDIAN: PRINCIPAL

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3500 FEET
SLOPE	55 PERCENT
DOUGLAS-FIR SITE INDEX	70.9 FEET AT 50 YEARS
VEGETATION SERIES	GRAND FIR
PARENT MATERIAL	VALLEY FILL
ASH DEPTH	NCNE
SOIL DEPTH	SHALLOW (< 12 IN)
TOTAL NITROGEN	2630 PPM
TOTAL PHOSPHORUS	1270 PPM
CARBON	1.89 PERCENT
MINERALIZABLE NITROGEN	67.7 PPM
COARSE FRAGMENTS	45.4 PERCENT
CORRECTED MINERALIZABLE N	37.3 PPM

STAND CHARACTERISTICS:

INITIAL AGE	32 YEARS
INITIAL TREES PER ACRE	213 TREES/ACRE
INITIAL BASAL AREA	47.9 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	738 CU.FEET/ACRE
RELATIVE DENSITY INDEX	18.9
MEAN DIAMETER	6.4 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	83.9 PERCENT
WESTERN LARCH	8.6 PERCENT
LODGEPOLE PINE	6.9 PERCENT
PCNDE ROSA PINE	0.6 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 47.9 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE				
			DIFFERENCE	% OF CONTROL			
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	11.8 16.4 16.0	4.6 4.2	38.5 35.5			
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	11.9 16.4 16.0	4.4 4.1	37.2 34.2			
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	3.8 4.2 4.7	0.4 0.9	11.2 22.8			
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	220 332 356	112 136	50.9 61.8			
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	228 332 356	104 128	45.5 56.0			
		FIRST TWO YEARS	SECOND TWO YEARS				
		RESPONSE		RESPONSE			
	TRT	INC	DIFP	%	INC	DIFP	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	7.1 9.7 8.9	2.6 1.8	36.0 25.3	4.7 6.6 7.0	2.0 2.3	41.6 50.0
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	7.1 9.7 9.0	2.6 1.8	36.1 25.5	4.8 6.6 7.0	1.8 2.2	37.5 45.6

INSTALLATION 240
 REGION: NORTHERN IDAHO OWNERSHIP: POTLATCH
 LEGAL DESCRIPTION: T37N R5E SECTION 8 MERIDIAN: BOISE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3500 FEET
SLOPE	15 PERCENT
DOUGLAS-FIR SITE INDEX	88.1 FEET AT 50 YEARS
VEGETATION SERIES	WESTERN REDCEDAR
PARENT MATERIAL	ASH OVER METASEDIMENT
ASH DEPTH	MEDIUM (3 TO 12 IN)
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	1118 PPM
TOTAL PHOSPHORUS	568 PPM
CARBON	2.42 PERCENT
MINERALIZABLE NITROGEN	46.5 PPM
COARSE FRAGMENTS	9.8 PERCENT
CORRECTED MINERALIZABLE N	42.0 PPM

STAND CHARACTERISTICS:

INITIAL AGE	41 YEARS
INITIAL TREES PER ACRE	345 TREES/ACRE
INITIAL BASAL AREA	149.7 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	3701 CU.FEET/ACRE
RELATIVE DENSITY INDEX	49.9
MEAN DIAMETER	8.9 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	79.0 PERCENT
GRAND FIR	3.5 PERCENT
WESTERN REDCEDAR	1.9 PERCENT
WESTERN LARCH	14.7 PERCENT
WHITE PINE	1.0 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 149.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	25.0		
	200 # N	31.5	6.6	26.3
	400 # N	31.1	6.1	24.5
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	25.0		
	200 # N	33.5	8.5	34.2
	400 # N	32.1	7.1	28.6
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	6.3		
	200 # N	6.9	0.6	9.9
	400 # N	6.7	0.4	6.0
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	994		
	200 # N	1173	179	18.0
	400 # N	1200	206	20.8
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	994		
	200 # N	1217	224	22.5
	400 # N	1213	219	22.0
			FIRST TWO YEARS	
			RESPONSE	
	TRE	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	12.3		
	200	15.0	2.7	21.8
	400	16.5	4.2	34.5
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	12.3		
	200	16.9	4.6	37.3
	400	16.5	4.2	34.5
			SECOND TWO YEARS	
			RESPONSE	
	TRE	INC	DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	12.7		
	200	16.5	3.8	30.0
	400	14.4	1.8	13.9
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	12.7		
	200	16.6	3.9	30.7
	400	15.6	2.9	22.8

INSTALLATION 241
 REGION: CENTRAL WASHINGTON OWNERSHIP: WASHINGTON DNR
 LEGAL DESCRIPTION: T33N R24E SECTION 9 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 3300 FEET
 SLOPE 3 PERCENT
 DOUGLAS-FIR SITE INDEX 61.9 FEET AT 50 YEARS
 VEGETATION SERIES DCUGLAS-FIR
 PARENT MATERIAL GLACIAL TILL
 ASH DEPTH DEEP (> 12 IN)
 SOIL DEPTH DEEP (> 24 IN)
 TOTAL NITROGEN 385 PPM
 TOTAL PHOSPHORUS 1132 PPM
 CARBON 1.05 PERCENT
 MINERALIZABLE NITROGEN 24.3 PPM
 COARSE FRAGMENTS 5.7 PERCENT
 CORRECTED MINERALIZABLE N 22.5 PPM

STAND CHARACTERISTICS:

INITIAL AGE 72 YEARS
 INITIAL TREES PER ACRE 303 TREES/ACRE
 INITIAL BASAL AREA 113.7 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 2618 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 39.5
 MEAN DIAMETER 8.3 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 88.9 PERCENT
 WESTERN LARCH 0.4 PERCENT
 LODGEPOLE PINE 0.9 PERCENT
 PONDEROSA PINE 9.8 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 113.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	19.9		
	200 # N	19.1	-0.8	-4.2
	400 # N	33.5	13.6	68.2
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	20.1		
	200 # N	23.3	3.2	15.9
	400 # N	33.5	13.4	66.8
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	4.2		
	200 # N	4.5	0.3	8.2
	400 # N	5.1	0.9	22.5
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	637		
	200 # N	623	-14	-2.2
	400 # N	990	353	55.4
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	639		
	200 # N	722	83	13.0
	400 # N	990	351	55.0

	TRT	INC	FIRST TWO YEARS				SECOND TWO YEARS			
			RESPONSE				RESPONSE			
			INC	DIFF	%		INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	9.4								
	200	9.3	-0.1	-0.6		10.4	-0.6	-5.9		
	400	15.8	6.4	68.3		17.7	7.3	70.1		
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	9.6								
	200	11.2	1.6	16.6		10.4	1.7	16.3		
	400	15.8	6.2	64.6		17.7	7.3	70.1		

INSTALLATION 242
 REGION: CENTRAL WASHINGTON OWNERSHIP: WASHINGTON DNR
 LEGAL DESCRIPTION: T39N R24E SECTION 13 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 4500 FEET
 SLOPE 19 PERCENT
 DOUGLAS-FIR SITE INDEX 47.7 FEET AT 50 YEARS
 VEGETATION SERIES DCUGLAS-FIR
 PARENT MATERIAL GLACIAL TILL
 ASH DEPTH SHALLOW (< 3 IN)
 SOIL DEPTH MODERATE (12 TO 24 IN)
 TOTAL NITROGEN 700 PPM
 TOTAL PHOSPHORUS 876 PPM
 CARBON 1.44 PERCENT
 MINERALIZABLE NITROGEN 52.2 PPM
 COARSE FRAGMENTS 28.6 PERCENT
 CORRECTED MINERALIZABLE N 37.3 PPM

STAND CHARACTERISTICS:

INITIAL AGE 87 YEARS
 INITIAL TREES PER ACRE 432 TREES/ACRE
 INITIAL BASAL AREA 138.1 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 3391 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 49.8
 MEAN DIAMETER 7.7 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 94.2 PERCENT
 LODGEPOLE PINE 5.8 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 138.1 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	12.1		
	200 # N	15.4	3.3	27.0
	400 # N	18.4	6.3	52.0
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	12.1		
	200 # N	15.4	3.3	27.0
	400 # N	20.7	8.6	71.0
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	1.8		
	200 # N	2.1	0.3	16.7
	400 # N	2.7	0.9	53.0
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	391		
	200 # N	450	59	15.2
	400 # N	587	196	50.2
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	391		
	200 # N	450	59	15.2
	400 # N	638	247	63.2

	FIRST TWO YEARS				SECOND TWO YEARS		
	TRT	INC	RESPONSE		INC	RESPONSE	
			DIFF	%		DIFF	%
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	6.0			6.1		
	200	7.8	1.8	30.4	7.6	1.5	24.0
	400	8.5	2.6	43.0	9.8	3.7	60.0
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	6.0			6.1		
	200	7.8	1.8	30.4	7.6	1.5	24.0
	400	10.7	4.7	79.6	10.0	3.8	62.5

INSTALLATION 243
 REGION: NORTHEAST WASHINGTON OWNERSHIP: WASHINGTON DNR
 LEGAL DESCRIPTION: T35N R40E SECTION 13 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	3300 FEET
SLOPE	18 PERCENT
DOUGLAS-FIR SITE INDEX	61.5 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	GLACIAL TILL
ASH DEPTH	MEDIUM (3 TO 12 IN)
SOIL DEPTH	MODERATE (12 TO 24 IN)
TOTAL NITROGEN	1239 PPM
TOTAL PHOSPHORUS	1445 PPM
CARBON	2.94 PERCENT
MINERALIZABLE NITROGEN	81.7 PPM
COARSE FRAGMENTS	26.6 PERCENT
CORRECTED MINERALIZABLE N	60.2 PPM

STAND CHARACTERISTICS:

INITIAL AGE	73 YEARS
INITIAL TREES PER ACRE	240 TREES/ACRE
INITIAL BASAL AREA	130.4 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	3350 CU.FEET/ACRE
RELATIVE DENSITY INDEX	41.2
MEAN DIAMETER	10.0 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	92.7 PERCENT
WESTERN LARCH	6.1 PERCENT
PONDEROSA PINE	1.1 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON
 INITIAL BASAL AREA OF 130.4 SQ-FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE		
			DIFFERENCE	% OF CONTROL	
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	9.6 16.8 14.0	7.2 4.4	75.3 45.7	
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL 200 # N 400 # N	15.8 18.0 17.8	2.2 2.1	14.2 13.0	
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL 200 # N 400 # N	4.0 4.7 4.3	0.7 0.3	17.4 6.6	
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	456 651 545	195 89	42.7 19.5	
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL 200 # N 400 # N	606 679 628	72 22	11.9 3.7	
		FIRST TWO YEARS	SECOND TWO YEARS		
		RESPONSE	RESPONSE		
	TRT	INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON 200 400	8.3 7.6 8.7	-0.6 0.5	-7.7 5.5	1.3 9.2 5.2
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON 200 400	8.3 8.9 8.7	0.5 0.4	6.4 4.7	7.4 9.2 9.1
					602.0 296.1
					23.1 22.8

INSTALLATION 244
 REGION: NORTHEAST OREGON OWNERSHIP: BIM (OREGON)
 LEGAL DESCRIPTION: T11S R45E SECTION 19 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION	5900 FEET
SLOPE	35 PERCENT
DOUGLAS-FIR SITE INDEX	62.1 FEET AT 50 YEARS
VEGETATION SERIES	DCUGLAS-FIR
PARENT MATERIAL	GRANITE
ASH DEPTH	NONE
SOIL DEPTH	DEEP (> 24 IN)
TOTAL NITROGEN	3837 PPM
TOTAL PHOSPHORUS	537 PPM
CARBON	2.96 PERCENT
MINERALIZABLE NITROGEN	72.0 PPM
COARSE FRAGMENTS	23.0 PERCENT
CORRECTED MINERALIZABLE N	55.5 PPM

STAND CHARACTERISTICS:

INITIAL AGE	90 YEARS
INITIAL TREES PER ACRE	207 TREES/ACRE
INITIAL BASAL AREA	272.2 SQ.FEET/ACRE
INITIAL TOTAL VOLUME	8320 CU.FEET/ACRE
RELATIVE DENSITY INDEX	68.6
MEAN DIAMETER	16.1 INCHES
SPECIES COMPOSITION (% OF TOTAL BA)	
DOUGLAS-FIR	100.0 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 272.2 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)				
	CONTROL	10.8		
	200 # N	14.1	3.3	30.6
	400 # N	12.7	1.9	18.0
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)				
	CONTROL	11.8		
	200 # N	14.1	2.3	19.8
	400 # N	12.7	1.0	8.3
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)				
	CONTROL	2.9		
	200 # N	3.4	0.5	18.0
	400 # N	3.2	0.3	10.3
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)				
	CONTROL	691		
	200 # N	778	87	12.7
	400 # N	753	62	9.0
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)				
	CONTROL	735		
	200 # N	778	43	5.8
	400 # N	753	17	2.3
FIRST TWO YEARS				
RESPONSE				
	TRT	INC	DIFF	%
SECOND TWO YEARS				
RESPONSE				
	INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)				
	CON	4.9		
	200	6.3	1.4	27.6
	400	5.5	0.6	13.1
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)				
	CON	5.2		
	200	6.3	1.0	19.8
	400	5.5	0.3	6.2
			6.6	
			7.8	1.3
			7.2	0.6
				9.4

INSTALLATION 245
 REGION: NORTHEAST OREGON OWNERSHIP: BIM (OREGON)
 LEGAL DESCRIPTION: T12S R44E SECTION 12 MERIDIAN: WILLAMETTE

SITE AND SOIL CHARACTERISTICS:

ELEVATION 5000 FEET
 SLOPE 18 PERCENT
 DOUGLAS-FIR SITE INDEX 62.3 FEET AT 50 YEARS
 VEGETATION SERIES DCUGLAS-FIR
 PARENT MATERIAL BASALT
 ASH DEPTH NCNE
 SOIL DEPTH MODERATE (12 TO 24 IN)
 TOTAL NITROGEN 4220 PPM
 TOTAL PHOSPHORUS 542 PPM
 CARBON 2.92 PERCENT
 MINERALIZABLE NITROGEN 68.7 PPM
 COARSE FRAGMENTS 29.1 PERCENT
 CORRECTED MINERALIZABLE N 48.5 PPM

STAND CHARACTERISTICS:

INITIAL AGE 52 YEARS
 INITIAL TREES PER ACRE 252 TREES/ACRE
 INITIAL BASAL AREA 191.7 SQ.FEET/ACRE
 INITIAL TOTAL VOLUME 3788 CU.FEET/ACRE
 RELATIVE DENSITY INDEX 55.1
 MEAN DIAMETER 12.2 INCHES
 SPECIES COMPOSITION (% OF TOTAL BA)
 DOUGLAS-FIR 100.0 PERCENT

GROWTH:

NOTE: ALL INCREMENTS HAVE BEEN ADJUSTED TO A COMMON INITIAL BASAL AREA OF 191.7 SQ.FEET/ACRE

	TREATMENT	INCREMENT	RESPONSE	
			DIFFERENCE	% OF CONTROL
FOUR-YEAR NET BASAL AREA (SQ.FEET/ACRE)	CONTROL	5.9		
	200 # N	9.9	4.1	69.1
	400 # N	18.1	12.3	208.6
FOUR-YEAR GROSS BASAL AREA (SQ.FEET/ACRE)	CONTROL	13.4		
	200 # N	16.7	3.4	25.2
	400 # N	18.1	4.8	35.7
FOUR-YEAR AVERAGE HEIGHT (FEET/TREE)	CONTROL	2.9		
	200 # N	3.3	0.4	12.0
	400 # N	4.6	1.7	56.9
FOUR-YEAR NET TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	353		
	200 # N	446	93	26.4
	400 # N	652	299	84.7
FOUR-YEAR GROSS TOTAL VOLUME (CU.FEET/ACRE)	CONTROL	513		
	200 # N	569	56	11.0
	400 # N	652	139	27.1
	<u>FIRST TWO YEARS</u>			
	<u>RESPONSE</u>			
	TRT	INC	DIFF	%
	<u>SECOND TWO YEARS</u>			
	<u>RESPONSE</u>			
	INC	DIFF	%	
TWO-YEAR PERIODIC NET BASAL AREA (SQ.FEET/ACRE)	CON	5.7		
	200	8.3	2.6	45.6
	400	9.1	3.4	59.8
TWO-YEAR PERIODIC GROSS BASAL AREA (SQ.FEET/ACRE)	CON	6.2		
	200	8.3	2.1	33.6
	400	9.1	2.9	46.2
	CON	7.1		
	200	8.4	1.3	18.3
	400	9.0	1.9	26.7

SECTION IV

Detailed Mensurational Summary of 1985 Ponderosa Pine Sites

PLOT SUMMARY

Installation 291 Sardine Spring

SPECIES	PLOT	NUMBER	BASAL AREA	NUM/ACRE	BA/ACRE	AVE DBH	PLCTSIZE (ACRE)	TREATMENT
PP	1	16	15.94	80	79.69	13.11		
TOTAL	1	16	15.94	80	79.69	13.11	0.200	200 LB/ACRE NITROGEN
PP	2	15	15.06	75	75.31	13.27		
TOTAL	2	15	15.06	75	75.31	13.27	0.200	CONTROL
PP	3	13	14.42	65	72.12	14.00		
TOTAL	3	13	14.42	65	72.12	14.00	0.200	400 LB/ACRE NITROGEN
PP	4	13	15.84	65	79.19	14.75		
TOTAL	4	13	15.84	65	79.19	14.75	0.200	400 LB/ACRE NITROGEN
PP	5	14	16.65	70	83.23	14.57		
TOTAL	5	14	16.65	70	83.23	14.57	0.200	CONTROL
PP	6	14	14.28	70	71.41	13.11		
TOTAL	6	14	14.28	70	71.41	13.11	0.200	200 LB/ACRE NITROGEN
GRAND TOTAL		85	92.19	71	76.82	13.76		

Ownership
U.S. Forest Service

Region
N.E. Oregon

Legal Description
T7S, R42E, S4, NE¼

Meridian
Willamette

PLOT SUMMARY

Installation 292 Sparta Butte

SPECIES	PLOT	NUMBER	BASAL AREA	NUM/ACRE	BA/ACRE	AVE DBH	PLOTSIZE (ACRE)	TREATMENT
DF	1	2	2.31	10	11.57	14.56		
PP	1	12	19.30	60	96.52	17.08		
TOTAL	1	14	21.62	70	108.09	16.72	0.200	200 LB/ACRE NITROGEN
DF	2	1	2.14	5	10.72	19.83		
PP	2	13	26.05	65	130.27	19.10		
TOTAL	2	14	28.20	70	140.99	19.16	0.200	CONTROL
PP	3	19	27.20	95	136.02	15.88		
TOTAL	3	19	27.20	95	136.02	15.88	0.200	400 LB/ACRE NITROGEN
PP	4	18	18.01	90	90.07	13.36		
TOTAL	4	18	18.01	90	90.07	13.36	0.200	400 LB/ACRE NITROGEN
DF	5	3	1.29	15	6.45	8.40		
PP	5	23	26.79	115	133.95	14.19		
TOTAL	5	26	28.08	130	140.39	13.53	0.200	CONTROL
DF	6	3	2.56	15	12.82	12.35		
PP	6	15	17.73	75	88.65	14.45		
TOTAL	6	18	20.29	90	101.47	14.10	0.200	200 LB/ACRE NITROGEN
GRAND TOTAL		109	143.41	91	119.51	15.14		

171

Ownership
U.S. Forest Service

Region
N.E. Oregon

Legal Description
T8S, R44E, S4, SE¼

Meridian
Willamette

PLOT SUMMARY

Installation 293 Summit Salvage

SPECIES	PLOT	NUMBER	EASAL AREA	NUM/ ACRE	BA/ ACRE	AVE DBH	PLGTSIZE (ACRE)	TREATMENT
DF	1	1	0.45	10	4.52	9.10		
PP	1	18	9.14	180	91.42	9.33		
TOTAL	1	19	9.59	190	95.94	9.32	0.100	200 LB/ACRE NITROGEN
PP	2	16	10.12	160	101.19	9.87		
TOTAL	2	16	10.12	160	101.19	9.87	0.100	CONTROL
DF	3	2	1.66	20	16.61	12.00		
EF	3	19	7.18	190	71.76	8.06		
TOTAL	3	21	8.84	210	88.37	8.44	0.100	400 LB/ACRE NITROGEN
PP	4	15	8.79	150	87.86	10.14		
TOTAL	4	15	8.79	150	87.86	10.14	0.100	200 LB/ACRE NITROGEN
PP	5	16	8.21	160	82.07	9.58		
TOTAL	5	16	8.21	160	82.07	9.58	0.100	CONTROL
PP	6	19	7.55	190	75.54	8.35		
TOTAL	6	19	7.55	190	75.54	8.35	0.100	400 LB/ACRE NITROGEN
GRAND TOTAL		106	53.10	177	68.50	9.21		

Ownership
U.S. Forest Service

Region
N.E. Oregon

Legal Description
T5S, R41E, S27, N1/4

Meridian
Willamette

PLOT SUMMARY
Installation 294 Moses Creek

SPECIES	PLOT	NUMBER	BASAL AREA	NUM/ACRE	BA/ACRE	AVE CBH	PLOTSIZE (ACRE)	TREATMENT
DF	1	2	0.16	10	0.79	3.80		
GF	1	1	0.15	5	0.76	5.28		
FP	1	21	25.57	105	127.87	13.97		
TOTAL	1	24	25.89	120	129.43	12.76	0.200	CONTROL
O	2	1	1.34	5	6.68	15.65		
DF	2	2	0.93	10	4.67	9.08		
WL	2	6	4.31	30	21.57	10.47		
FP	2	19	20.45	95	102.25	13.54		
TOTAL	2	28	27.03	140	135.16	12.64	0.200	200 LB/ACRE NITROGEN
DF	3	3	3.21	15	16.05	13.04		
WL	3	2	0.35	10	1.74	5.63		
FP	3	16	21.70	80	108.50	15.11		
TOTAL	3	21	25.26	105	126.29	13.92	0.200	400 LB/ACRE NITROGEN
FP	4	18	26.04	90	130.19	15.94		
TOTAL	4	18	26.04	90	130.19	15.94	0.200	400 LB/ACRE NITROGEN
FP	5	25	30.12	125	150.60	14.11		
TOTAL	5	25	30.12	125	150.60	14.11	0.200	CONTROL
FP	6	28	29.89	140	149.47	13.08		
TOTAL	6	28	29.89	140	149.47	13.08	0.200	200 LB/ACRE NITROGEN
GRAND TOTAL		144	164.23	120	136.86	13.60		

Ownership
Boise Cascade Corp.

Region
N.E. Oregon

Legal Description
T3N, R40E, S30, NW¼

Meridian
Willamette

PLOT SUMMARY
Installation 295 Parker's Flat

SPECIES	PLGT	NUMBER	BASAL AREA	HUM/ACRE	BA/ACRE	AVE DBH	PLCTSIZE (ACRE)	TREATMENT
PP	1	26	10.37	260	103.70	8.32		
TOTAL	1	26	10.37	260	103.70	8.32	0.100	CONTROL
PP	2	25	10.85	250	108.46	8.84		
TOTAL	2	25	10.85	250	108.46	8.84	0.100	400 LB/ACRE NITROGEN
PP	3	28	11.81	280	118.10	8.57		
TOTAL	3	28	11.81	280	118.10	8.57	0.100	200 LB/ACRE NITROGEN
PP	4	22	12.75	220	127.50	10.13		
TOTAL	4	22	12.75	220	127.50	10.13	0.100	400 LB/ACRE NITROGEN
PP	5	22	13.85	220	138.52	10.65		
TOTAL	5	22	13.85	220	138.52	10.65	0.100	200 LB/ACRE NITROGEN
PP	6	24	12.46	240	124.58	9.42		
TOTAL	6	24	12.46	240	124.58	9.42	0.100	CONTROL
GRAND TOTAL		147	72.09	245	120.14	9.26		

Ownership
Boise Cascade Corp.

Region
N.E. Oregon

Legal Description
T2N, R39E, S34, NW¼

Meridian
Willamette

PLOT SUMMARY
Installation 296 Corral Creek

SPECIES	PLOT	NUMBER	BASAL AREA	NUM/ACRE	BA/ACRE	AVE DBH	PLOTSIZE (ACRE)	TREATMENT
PP	1	15	8.25	150	82.55	9.83		
TOTAL	1	15	8.25	150	82.55	9.83	0.100	400 LB/ACRE NITROGEN
PP	2	17	7.83	170	78.30	9.00		
TOTAL	2	17	7.83	170	78.30	9.00	0.100	CONTROL
PP	3	18	9.35	180	93.48	9.65		
TOTAL	3	18	9.35	180	93.48	9.65	0.100	200 LB/ACRE NITROGEN
PP	4	20	8.88	200	88.78	8.75		
TOTAL	4	20	8.88	200	88.78	8.75	0.100	CONTROL
PP	5	16	10.64	160	106.43	10.74		
TOTAL	5	16	10.64	160	106.43	10.74	0.100	400 LB/ACRE NITROGEN
PP	6	19	10.62	190	106.20	10.02		
TOTAL	6	19	10.62	190	106.20	10.02	0.100	200 LB/ACRE NITROGEN
GRAND TOTAL		105	55.57	175	92.62	9.63		
<u>Ownership</u>			<u>Region</u>		<u>Legal Description</u>		<u>Meridian</u>	
U.S. Forest Service			Central Washington		T21N, R14E, S24, SE¼		Willamette	

PLOT SUMMARY

Installation 297 Upper Mud Creek

SPECIES	PLOT	NUMBER	EASAL AREA	HUM/ACRE	BA/ACRE	AVERAGE DBH	PLOTSIZE (ACRE)	TREATMENT
FF	1	14	7.06	140	70.59	9.48		
TOTAL	1	14	7.06	140	70.59	9.48	0.100	CONTROL
FP	2	12	6.60	120	66.00	9.99		
TOTAL	2	12	6.60	120	66.00	9.99	0.100	400 LB/ACRE NITROGEN
FP	3	14	6.19	140	61.90	8.95		
TOTAL	3	14	6.19	140	61.90	8.95	0.100	200 LB/ACRE NITROGEN
FP	4	17	6.26	170	62.64	8.12		
TOTAL	4	17	6.26	170	62.64	8.12	0.100	200 LB/ACRE NITROGEN
FP	5	17	7.69	170	76.91	8.98		
TOTAL	5	17	7.69	170	76.91	8.98	0.100	CONTROL
FP	6	19	8.00	190	80.05	8.75		
TOTAL	6	19	8.00	190	80.05	8.75	0.100	400 LB/ACRE NITROGEN
GRAND TOTAL		93	41.81	155	69.68	8.98		

Ownership

U.S. Forest Service

Region

Central Washington

Legal Description

T27N, R20E, S25, SE¼

Meridian

Willamette

PLOT SUMMARY

Installation 298 Lilly Lake

SPECIES	PLOT	NUMBER	BASAL AREA	NUM/ACRE	BA/ACRE	AVE DBH	PLCTSIZE (ACRE)	TREATMENT
PF	1	19	10.16	190	101.56	9.60		
TOTAL	1	19	10.16	190	101.56	9.60	0.100	200 LB/ACRE NITROGEN
PF	2	19	9.43	190	94.32	9.35		
TOTAL	2	19	9.43	190	94.32	9.35	0.100	CONTROL
PF	3	18	10.49	180	104.86	10.26		
TOTAL	3	18	10.49	180	104.86	10.26	0.100	400 LB/ACRE NITROGEN
PF	4	15	7.18	150	71.76	9.27		
TOTAL	4	15	7.18	150	71.76	9.27	0.100	200 LB/ACRE NITROGEN
PF	5	20	8.27	200	82.69	8.59		
TOTAL	5	20	8.27	200	82.69	8.59	0.100	CONTROL
PF	6	15	8.46	150	84.59	9.85		
TOTAL	6	15	8.46	150	84.59	9.85	0.100	400 LB/ACRE NITROGEN
GRAND TOTAL		106	53.98	177	89.96	9.46		

Ownership
Washington Dept. of
Natural Resources

Region
Central Washington

Legal Description
T21N, R20E, S22, SW4

Meridian
Willamette

PLOT SUMMARY
Installation 299 Lick Creek

SPECIES	PLOT	NUMBER	BASAL AREA	NUM/ACRE	BA/ACRE	AVE DBH	PLOTSIZE (ACRE)	TREATMENT
DP	1	2	0.83	20	8.26	8.70		
PP	1	26	15.45	260	154.49	10.15		
TOTAL	1	28	16.27	280	162.75	10.05	0.100	400 LB/ACRE NITROGEN
PP	2	21	15.77	210	157.73	11.57		
TOTAL	2	21	15.77	210	157.73	11.57	0.100	200 LB/ACRE NITROGEN
DP	3	1	0.97	10	9.69	13.33		
PE	3	22	15.46	220	154.58	10.94		
TOTAL	3	23	16.43	230	164.27	11.05	0.100	CONTROL
PP	4	22	15.99	220	159.92	11.30		
TOTAL	4	22	15.99	220	159.92	11.30	0.100	CONTROL
PP	5	24	16.58	240	165.77	11.08		
TOTAL	5	24	16.58	240	165.77	11.08	0.100	200 LB/ACRE NITROGEN
PP	6	24	19.45	240	194.52	11.87		
TOTAL	6	24	19.45	240	194.52	11.87	0.100	400 LB/ACRE NITROGEN
GRAND TOTAL		142	100.50	237	167.49	11.11		

Ownership
Boise Cascade Corp.

Region
Central Washington

Legal Description
T21N, R16E, S30, NE¼

Meridian
Willamette

PLOT SUMMARY
Installation 300 Sage Flat

SPECIES	PLOT	NUMBER	BASAL AREA	NUM/ACRE	EA/ACRE	AVE DBH	PLCTSIZE (ACRE)	TREATMENT
PP	1	21	22.00	210	220.04	13.42		
TOTAL	1	21	22.00	210	220.04	13.42	0.100	CONTROL
PP	2	26	21.92	260	219.18	12.10		
TOTAL	2	26	21.92	260	219.18	12.10	0.100	200 LB/ACRE NITROGEN
PP	3	20	18.92	200	189.21	12.73		
TOTAL	3	20	18.92	200	189.21	12.73	0.100	400 LB/ACRE NITROGEN
PP	4	25	23.90	250	238.99	12.80		
TOTAL	4	25	23.90	250	238.99	12.80	0.100	400 LB/ACRE NITROGEN
PP	5	22	20.64	220	206.45	12.63		
TOTAL	5	22	20.64	220	206.45	12.63	0.100	200 LB/ACRE NITROGEN
PP	6	24	21.07	240	210.72	12.37		
TOTAL	6	24	21.07	240	210.72	12.37	0.100	CONTROL
GRAND TOTAL		138	128.46	230	214.10	12.65		

Ownership
Washington Dept. of
Natural Resources

Region
Central Washington

Legal Description
T6N, R12E, S17, N¼

Meridian
Willamette