

Fjallapinsverkefni, 1999-2002

- Hófst vorið 1999, styrkt af SNS og Rannís
 - Markmiðið var að taka á sem flestum þáttum jólatrjáræktunar með fjallapin
1. **Kvæmatilraun** á Hallormsstað og í Haukadal
 2. **Frostpolsprófun** 26 kvæma
 3. **Áburðartilraun** á Höfða og í Haukadal (Silva pac)
 4. **Plöntugerðartilraun** í Haukadal (Vorgróðursetning, góðar fjölpottaplöntur).
 5. **Illgresistilraun** í Haukadal (Plæging best)
 6. Prófun á **Roundup-þoli** á Vöglum (Haustúðun í lagi)

Útbreiðslusvæði fjallapins



Útbreiðslusvæði:

62-32°N

100-3600 m.y.s.

júlíhiti 7 til 16°C

janúarhiti -15 til -4°C

Dönsk söfnun

- 1993 og 1994
- 26 kvæmi

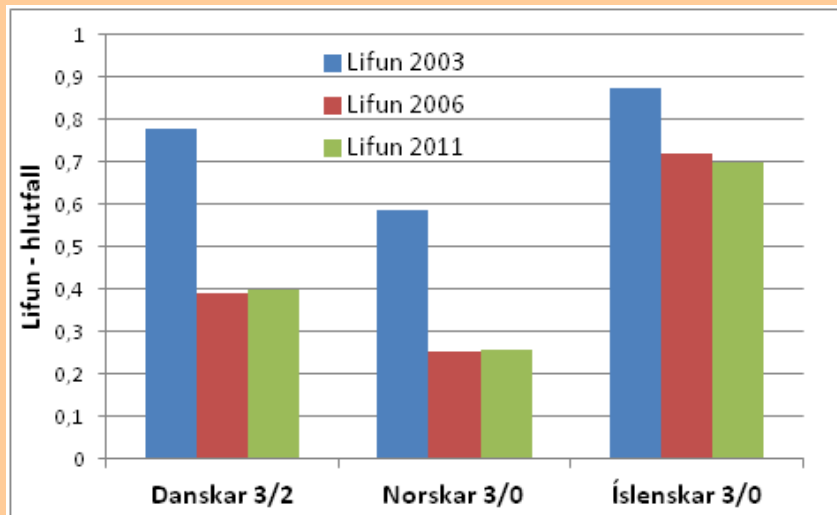
Norsk söfnun

- 1995 og 1996
- 72 kvæmi

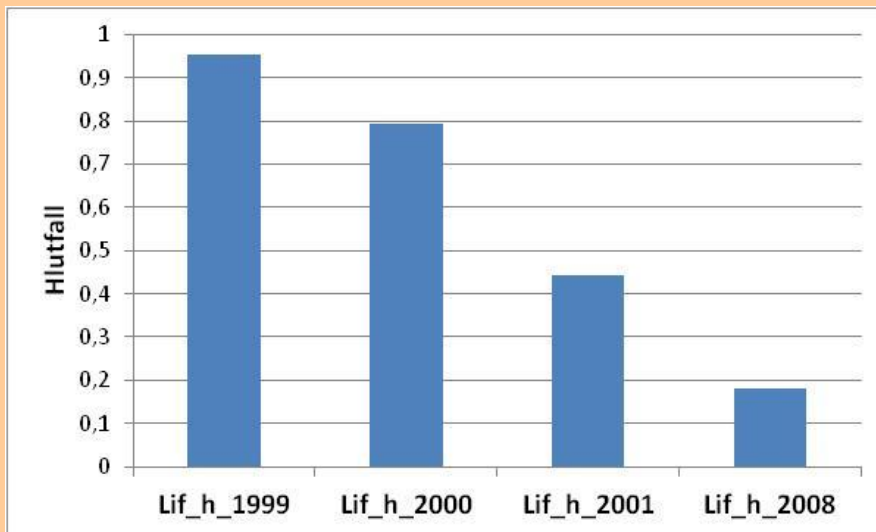
Kvæmatilraun, Hallormsstaður



Þróun lifunar á Hallormsstað



Þróun lifunar í Haukadal (norskar pl.)

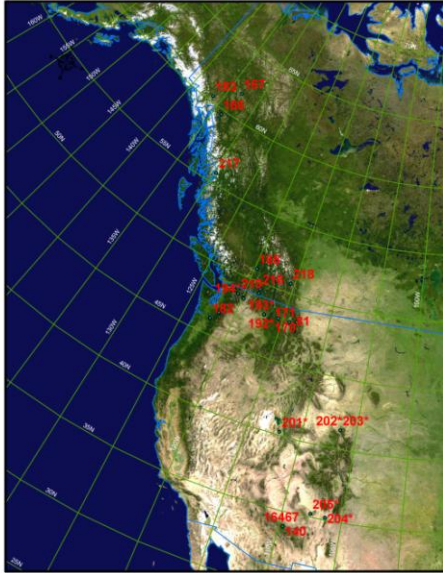


Ástæður affalla

- Lélegar plöntur
- Samkeppni við gras
- Sviðnun
- Kal

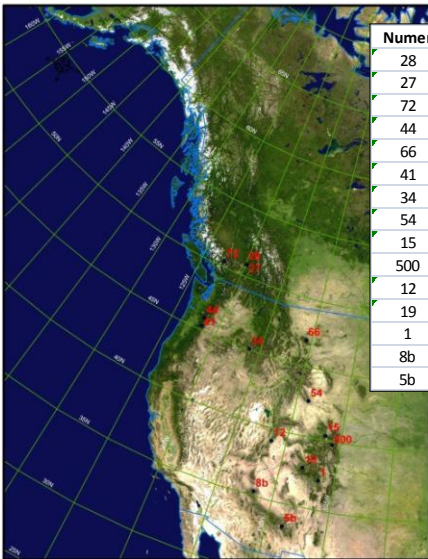


Yfirlit yfir dönsku söfnunina – Hallormsst.



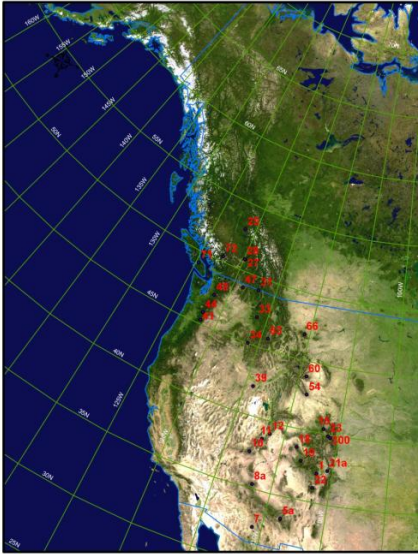
Númer	Fylki	Breidd	Langd	HYS	Kvæmi
167	Yukon	61°50'	133°	900	Canol Road
183	Alaska	59°85'	135°83'	800	Seed zone A16, Skagway
166	Br. Col.	59°40'	133°45'	800	Atlin
217	Br. Col.	55°48'	129°45'	320	White River
168	Br. Col.	50°50'	119°45'	1400	Adams Plateau
218	Br. Col.	50°43'	115°27'	1525	Albert River
216	Br. Col.	49°33'	118°31'	1970	Blue Joint
219	Br. Col.	49°14'	118°30'	1300	
196*	Wash.	48°37'	120°36'	-	Okanogan N.F., Mile Marker 172, Rt. 20
194*	Wash.	48°29'	119°58'	1300	Okanogan N.F., For. Rd. 42, Looploop Campg Rd.
195*	Wash.	48°26'	119°50'	1500	Okanogan N.F., For. Rd. 42, Rt. 20
191*	Montana	48°10'	113°30'	1200	Flathead N.F., West of Marias Pass
170	Montana	48°00'	115°30'	-	Kootenai N.F.
171	Montana	48°00'	114°15'	-	Flathead N.F.
192*	Wash.	47°55'	117°07'	1400	Mt. Spokane
193*	Wash.	47°55'	117°07'	1500	Mt. Spokane
81	Montana	47°30'	113°30'	-	Flathead N.F., Hungry Horse
199*	Wash.	46°47'	121°40'	-	Mt. Rainier N.F., Before Stevens Creek Cross.
182	Wash.	46°10'	122°15'	1200-1400	Seed zone 440, South-west of Mt. St. Helens
202*	Wyoming	41°21'	106°32'	2400	Medicine Bow N.F., East of E.S. Work Camp
203*	Wyoming	41°21'	106°32'	2400	Medicine Bow N.F., East of E.S. Work Camp
201*	Utah	40°15'	112°00'	-	Wasatch N.F., Rt. Cottonwood Canyon
205*	New Mexico	35°15'	107°40'	2900	Cibola N.F., Mt. Taylor
204*	New Mexico	35°11'	106°25'	2900	Cibola N.F., Sandra Crest
67	Arizona	34°00'	109°38'	-	Apache N.F., Hannigan Meadows
140	Arizona	34°00'	109°38'	2900-3200	Apache N.F., Hannigan Meadows + Big Lake
164	Arizona	34°00'	109°38'	3150	Apache N.F.

Yfirlit yfir norsku söfnunina – Hallormsstaður



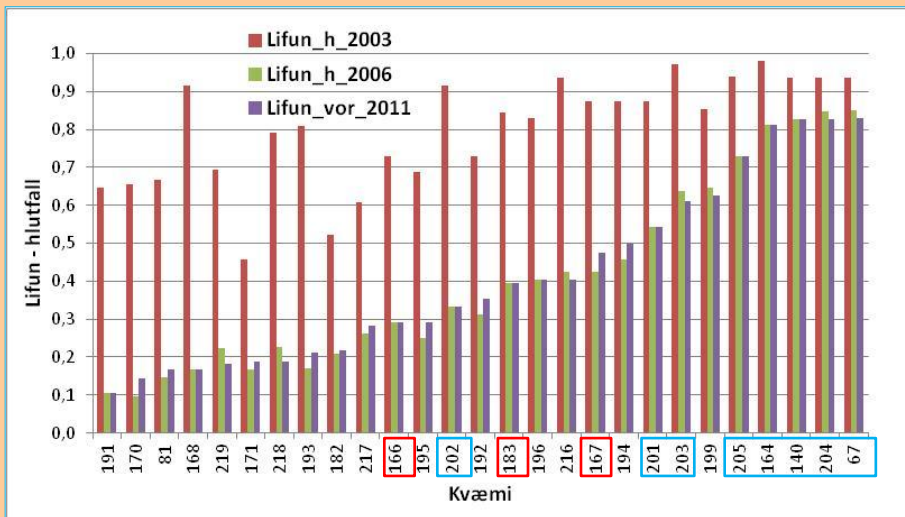
Númer	X	Y	Kvæmi	Fylki	HYS
28	50°53'	119°55'	Sun Peaks	British Columbia	1200
27	50°52'	119°50'	McGillivray Lake	British Columbia	1400
72	50°23'	122°25'	Duffy Lake	British Columbia	1500
44	48°49'	121°49'	Red Mt.	Washington	1450
66	46°55'	110°36'	Jefferson Creek	Montana	2200
41	45°19'	121°44'	Still Creek	Oregon	1450
34	45°03'	116°09'	Goose Lake	Idaho	1950
54	42°35'	108°51'	Louis Lake	Wyoming	2650
15	40°22'	106°33'	Rabitt Ears Pass	Colorado	2900
500	39°47'	105°46'	Arapaho	Colorado	3350
12	39°08'	111°22'	Willow Lake	Utah	2900
19	37°47'	108°01'	The Meadows	Colorado	3100
1	37°06'	106°25'	Spruce Hole	Colorado	3150
8b	35°20'	111°42'	Agassiz Peak	Arizona	2925
5b	33°27'	108°40'	Bearwallow Mt.	New Mexico	2950

Yfirlit yfir norsku söfnunina - Haukadalur

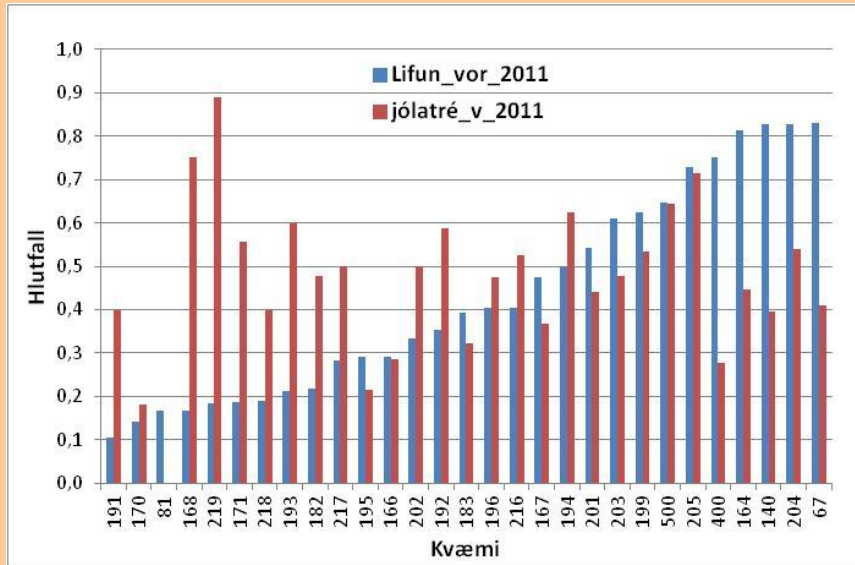


Numer	X	Y	Kvæmi	Fylki	HYS
25	52°59'	121°20'	Cunningham Creek	British Columbia	1300
28	50°53'	119°55'	Sun Peaks	British Columbia	1200
27	50°52'	119°50'	McGillivray Lake	British Columbia	1400
72	50°23'	122°25'	Duffy Lake	British Columbia	1500
71	49°08'	124°40'	Grassie Mt.	British Columbia	1150
31	49°04'	117°02'	Kootenay Pass	British Columbia	1650
44	48°49'	121°49'	Red Mt.	Washington	1450
47	48°49'	118°49'	Hardscabble Mt.	Washington	1500
49	47°27'	121°29'	Snoqualmie Pass	Washington	1200
33	47°06'	116°10'	Davies Pass	Idaho	1250
66	46°55'	110°36'	Jefferson Creek	Montana	2200
63	45°50'	114°16'	North Trapper Peak	Montana	2000
41	45°19'	121°44'	Still Creek	Oregon	1450
34	45°03'	116°09'	Goose Lake	Idaho	1950
60	43°53'	109°18'	Wood River	Wyoming	2500
54	42°35'	108°51'	Louis Lake	Wyoming	2650
39	42°08'	121°14'	Monument Peak	Idaho	2400
15	40°22'	106°33'	Rabitt Ears Pass	Colorado	2900
23	39°55'	106°00'	Church Park	Colorado	2925
300	39°47'	105°46'	Arapaho	Colorado	3350
12	39°08'	111°22'	Willow Lake	Utah	2900
18	38°41'	108°40'	Divide Fork	Colorado	2700
11	38°39'	111°57'	Big Lake	Utah	2870
19	37°47'	108°01'	The Meadows	Colorado	3100
10	37°32'	112°44'	Duck Lake	Utah	2770
21b	37°25'	105°30'	Apishapa River	Colorado	3250
1	37°06'	106°25'	Spruce Hole	Colorado	3150
22	36°03'	106°32'	Cerro Pavo	New Mexico	2900
8b	35°20'	111°42'	Agassiz Peak	Arizona	2925
5b	33°27'	108°40'	Bearwallow Mt.	New Mexico	2950
7	32°26'	110°46'	Mt. Lemmon	Arizona	2750

Lifun Hallormsstaður – DK-plöntur



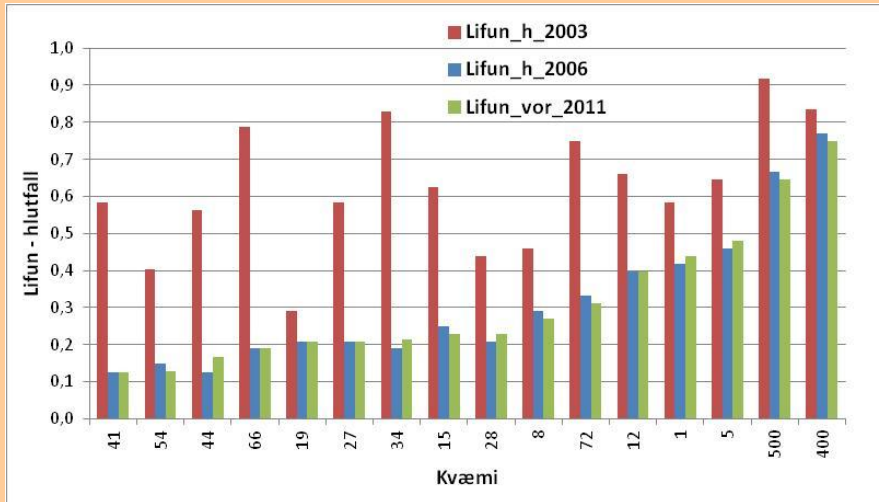
Hallormsstaður – DK-plöntur Jólatrjáahlutfall innan kvæma



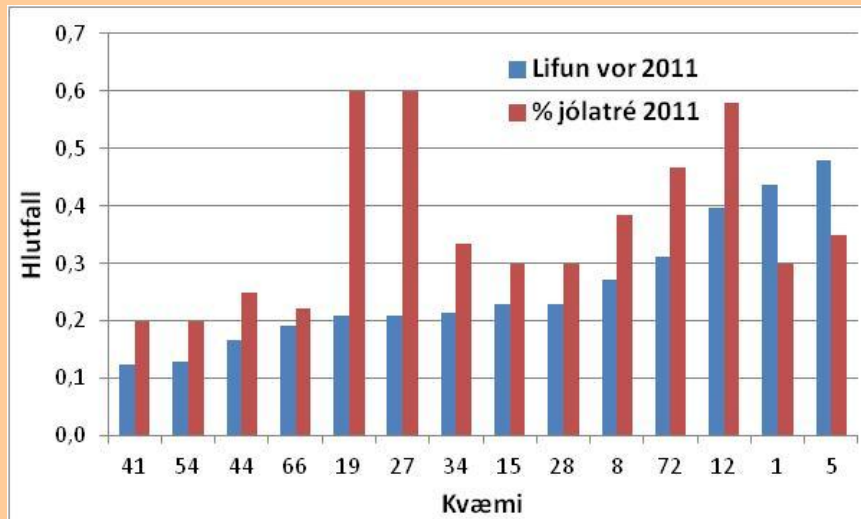
Hallormsstaður – DK-plöntur, frávik frá meðaltali

	Meðaltal	118,38	0,41	1,31	0,65	4,17	4,08	4,00	0,47	0,19
Br.gr.	Kvæmi nr.	Hæð_11	Lifun_11	Litur	Breidd/hæð	Fj. greina	Fj. bruma	Fj. milligr.	Jólatré	Lif.*Jólatré
62	167	124	115	92	97	106	93	94	79	91
60	183	105	96	98	102	91	95	75	69	66
60	166	105	71	93	103	81	82	79	61	43
56	217	128	69	121	92	138	119	88	107	74
51	168	100	41	76	96	78	80	56	161	65
51	218	102	46	92	85	86	101	168	86	39
50	216	110	98	92	99	107	103	145	113	111
49	219	76	45	76	108	93	112	78	190	85
49	196	97	98	84	116	101	94	58	101	100
48	194	115	122	92	95	118	113	109	134	163
48	195	82	71	82	94	98	100	77	46	33
48	191	99	25	107	93	120	128	175	86	22
48	171	111	46	85	95	101	123	153	119	54
48	170	87	35	76	109	105	109	102	39	14
48	192	103	86	81	102	100	95	130	126	108
48	193	102	52	76	99	101	98	80	128	66
48	81	70	41	76	106	79	70	54	0	0
47	199	99	152	135	92	136	92	88	114	174
46	182	85	53	105	120	110	105	58	102	54
41	203	106	149	84	92	106	100	85	102	151
41	202	106	81	76	81	114	110	125	107	87
40	201	95	132	79	97	118	117	100	94	124
35	205	97	177	161	112	94	104	115	153	271
35	204	92	201	186	105	80	85	101	116	232
34	164	102	198	137	105	78	90	108	96	189
34	67	95	202	119	106	73	89	97	88	177
34	140	103	201	118	100	86	92	103	85	170

Lifun Hallormsstaður – NO-plöntur



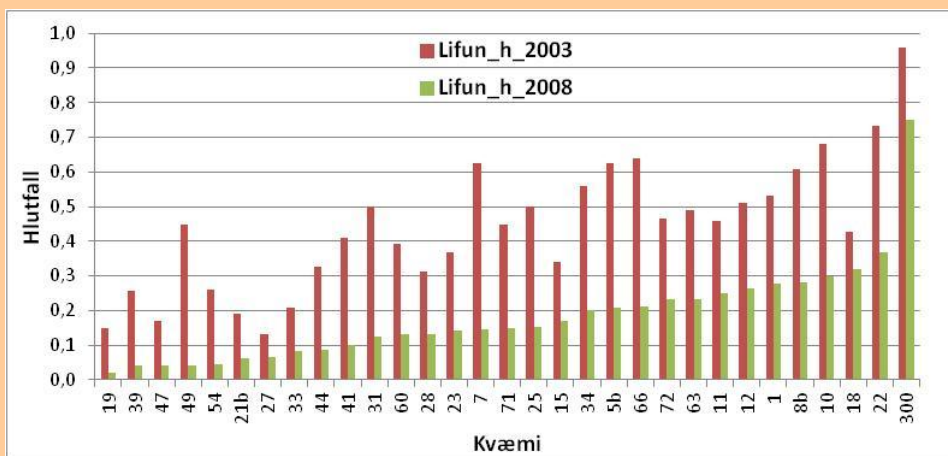
Hallormsstaður – NO-plöntur Jólatrjáahlutfall innan kvæma



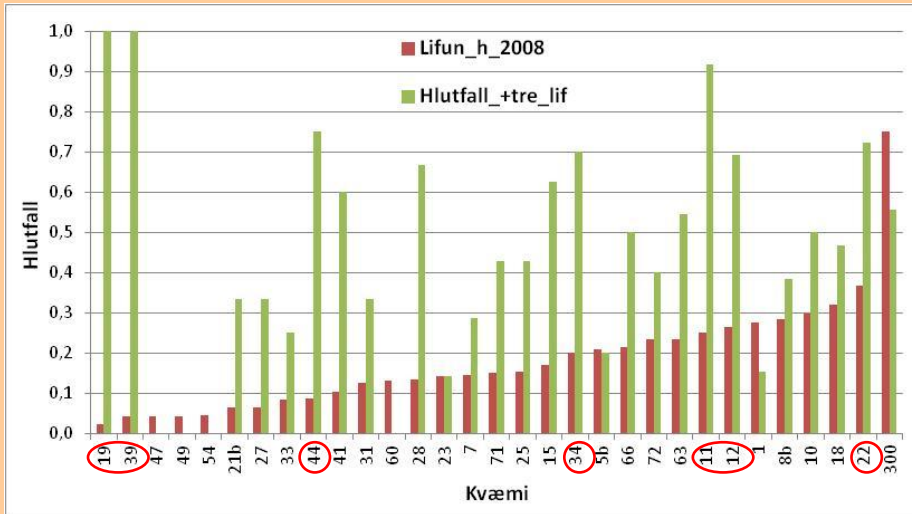
Hallormsstaður – NO-plöntur, frávik frá meðaltali

	Meðaltal	73,83	0,26	1,23	0,67	3,56	3,78	2,72	0,36	0,09
Br.gr.	Kvæmi nr.	Hæð	Lifun_11	Litur	Breidd/hæð	Fj. greina	Fj. bruma	Fj. milligr.	Jólatré	Lif.*Jólatré
50°53'	28	115	89	90	99	110	103	184	83	74
50°52'	27	120	81	82	99	113	106	110	165	134
50°23'	72	115	122	109	116	105	104	101	129	156
48°49'	44	121	65	102	92	116	109	83	69	45
46°55'	66	87	75	82	83	88	91	49	61	46
45°19'	41	67	49	82	92	113	106	22	55	27
45°03'	34	102	83	82	91	88	97	82	92	76
42°35'	54	74	50	179	111	79	90	29	55	27
40°22'	15	76	89	82	103	84	90	132	83	74
39°08'	12	110	154	82	105	117	117	105	159	246
37°47'	19	115	81	90	107	113	111	224	165	134
37°06'	1	78	170	106	91	90	95	85	83	141
35°20'	8	111	105	125	96	106	96	93	106	112
33°27'	5	107	187	110	116	81	84	101	96	179

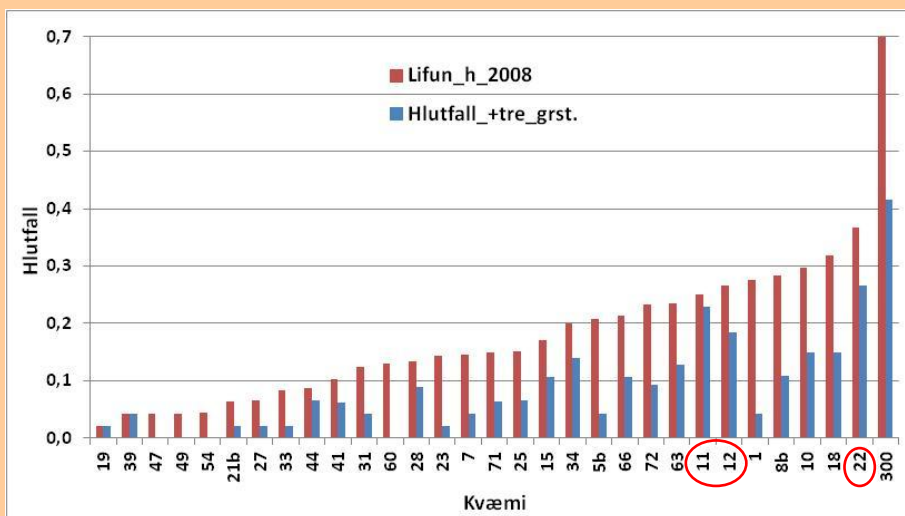
Lifun Haukadalur – NO-plöntur



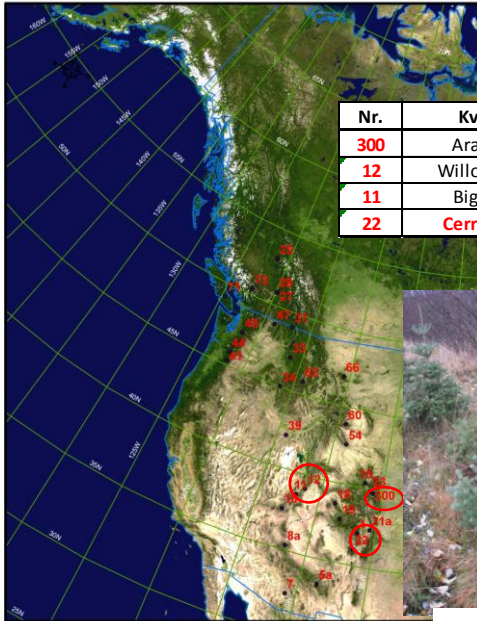
Haukadalur – NO-plöntur + tré innan kvæma



Haukadalur – NO-plöntur + tré af gróðursettum trjám



Bestu kvæmin Haukadalur



Nr.	Kvæmi	Fylki	Br.gr.	HYS
300	Arapaho	Colorado	39°47'	3350
12	Willow Lake	Utah	39°08'	2900
11	Big Lake	Utah	38°39'	2870
22	Cerro Pavo	New Mexico	36°03'	2900

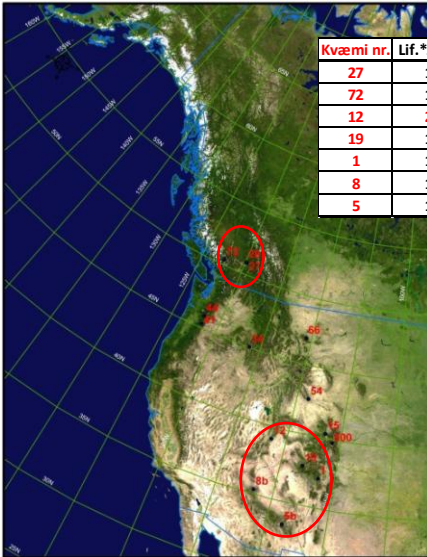


11 – Big Lake



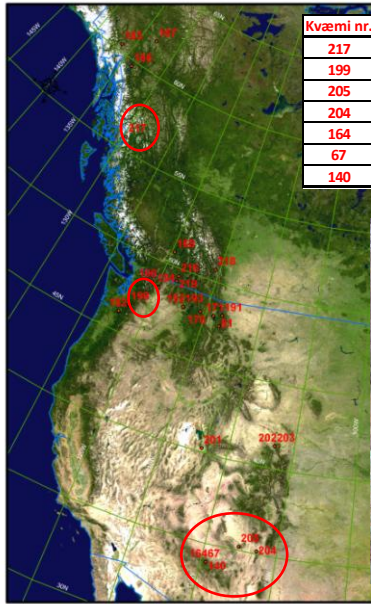
300 - Arapaho

Bestu kvæmin – NO - Hallormsstaður



Kvæmi nr.	Lif.*Jólatré	Kvæmi	Fylki	Br.gr.	HYS
27	134	McGillivray Lake	British Columbia	50°52'	1400
72	156	Duffy Lake	British Columbia	50°23'	1500
12	246	Willow Lake	Utah	39°08'	2900
19	134	The Meadows	Colorado	37°47'	3100
1	141	Spruce Hole	Colorado	37°06'	3150
8	112	Agassiz Peak	Arizona	35°20'	2925
5	179	Bearwallow Mt.	New Mexico	33°27'	2950

Bestu kvæmin-DK-Hallormsstaður



Kvæmi nr.	Lif.*Jólatré	Kvæmi	Fylki	Br.gr.	HYS
217	74	White River	Br. Col.	56	320
199	174	Mt. Rainier N.F.	Wash.	47	-
205	271	Cibola N.F., Mt. Taylor	New Mexico	35	2900
204	232	Cibola N.F., Sandria Crest	New Mexico	35	2900
164	189	Apache N.F.	Arizona	34	2900-3200
67	177	Apache N.F.	Arizona	34	-
140	170	Apache N.F.	Arizona	34	2900-3200

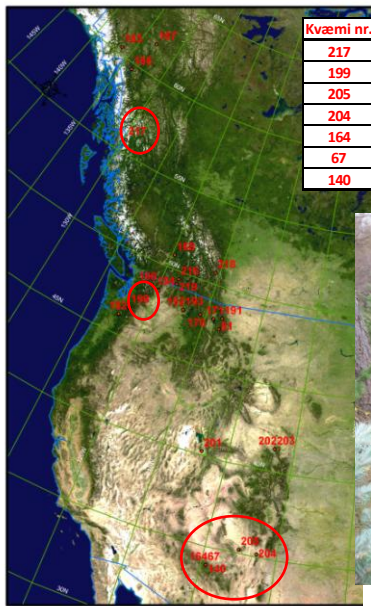


67 – Apache N.F.



199 – Mt. Rainier

Bestu kvæmin-DK-Hallormsstaður



Kvæmi nr.	Lif.*Jólatré	Kvæmi	Fylki	Br.gr.	HYS
217	74	White River	Br. Col.	56	320
199	174	Mt. Rainier N.F.	Wash.	47	-
205	271	Cibola N.F., Mt. Taylor	New Mexico	35	2900
204	232	Cibola N.F., Sandria Crest	New Mexico	35	2900
164	189	Apache N.F.	Arizona	34	2900-3200
67	177	Apache N.F.	Arizona	34	-
140	170	Apache N.F.	Arizona	34	2900-3200



205 Cibola/Taylor



204 Cibola/S. Crest

