

Germination Bitterbrush 1960

Madoc seed - collected 1935

Sept 11

1960

Test carried out at Jensenville.

Hornay

@ 305 Hall

		76		
		(embryos)		
Sept 11	3 PM	Seeds excised and placed in Petri dishes. Selected "good" seed		
Sept 13	8 AM	First sign of root curvature		
15	6 PM	Roots 1/4 to 1/2" long. Cotyledons pink		
15		Germinated	Rotted	Did not germinate completely
15		44	12	20
17		45	15	16
			Prob seed no good at start.	Faulty seed.

Total seeds 76
Viable seeds 45

$$\frac{45}{76} = 59.2\% \text{ viable embryos}$$

Madoc 1935 seed

59% viability

on Sept 11 1960

Excluded

Viability by strat.

Bitterbrush Seed

1961

Modoc (1935 collection)

Mar. 7 1961
Hormay

Lab 12 Berk

Seed strat. in Petri dish @ 41°F starting Dec. 29, 1960

Sample 1

- out strat into lab @ 70°F Feb 9

43 day strat

Total seeds		117	
Good seeds germinated	↔	94	100%
" " excised & ger. part of		33	80% ← Avg. viability
Decayed seeds soft	}	23	20
Root tips decayed			
Gray or brown decaying			
Damaged in seeds etc			

Feb 6 in strat	Days	Germination		%
		Roots with white tips		
" 6	0	0	0	0
" 10	1	12	12	
" 13	4	44	56	
" 14	5	5	61	
" 15	6	<u>end</u>		

65% = $\frac{61}{94}$

Sample 2

out strat into lab Febr. 23 2:30 PM

56 day strat

Total seeds		132			
T good seeds	→	73	55%		
" " " excised & ger	included here	77	- all good		
Decayed soft	}	39	Bad seed.		
Root tip decayed					
Gray-brown decaying					
Damaged seed					
Febr. 23 2:30 PM		2	$\frac{1}{8}$	2	
" 27 10:00 AM		47	$\frac{5}{8}$	49	
Mar 3 4:00 PM		11	$\frac{5}{8}$	60	
" 7 8:00 AM		6	$\frac{1}{2}$	66	90% = $\frac{66}{73}$

Note End

end

Completed

Seed germination

Febr. 17/61
Hormay

Bank Lab 17

	<i>Ceanothus cuneatus</i>	<i>Pereskia tridentata</i>	<i>Pereskia tridentata</i>	<i>Pereskia tridentata</i>	JFA Sus Airport
	200 seeds		BPM Ex 1944	Tularem Lake P9070	
Mar 11 1954	Thio 18 hrs	Thio 18 hrs			
Feb 10 1961	Wetted in Lab.	Wetted in Lab	Thio 10'	Thio 10'	Thio 10'
Febr. 17 1961	No ger.				
Febr 20 1961	No ger	15% approx extracted	2% extracted	No ger	No ger
Febr 23	No ger	1 root 3/4" long		inert	inert
	end	end	end	end	end
		Try excising		Try excising	Try excising

Madec 1935
Sample No 3

Mar 3 1961
Total seeds
Good seeds
Bad seeds
March 6 9:00 AM
March 8 10:00 AM
" 9 8: AM
March 10 8:30 AM decayed
Mar 13
Mar 13
Soft decay
Root tip decay 1

out strat into 60°F PP Lab

156
116 → germinated
40
42 3/4"
9 1/4 - 3/4"
11 1/8 - 1/2"

3 PM
64 days
Strat

3 with root tips decaying
after excising
2 decayed 8 part ger root tips decayed

end

Germ 92 + 9 + 11 = 112
Made by excise = 4
Total viable 116
116 / 116 = 100%

Viability trend Modoc 1935 seed

No	Date of viability test	Method				Basis No seeds	% viability
1960	Sept 11	3PM	} Excised (selected seed) First sign growth 305 Hall			76	59°
	" 13	8AM					
1961	Febr 9	Strat @ 41°F	43 days	Sample 1		117	80
	" 23	" " "	56 "	" 2		132	55
	Mar 3	" "	64 "	" 3		156	74