

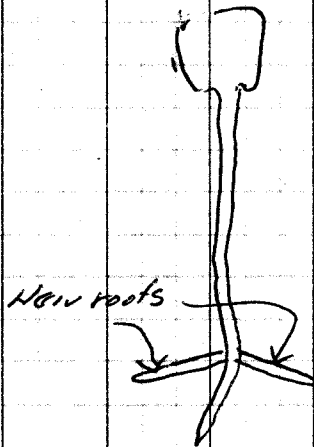
Febr 27 1961

"

So, CERled embryos not dormant will grow if excised. These species have seed coat dormancy like Pt. Problem to make seed coats permeable to gases.

"

Germinating seedling of Pt sprouted secondary root at $1\frac{1}{4}$ " length



5

4

P. glandulosa - Germination

Hormay.

Inyo seed

	41°F	327 room	327 bakemade	45°F	41°F	41°F		
Sample No	41	50	48	52	49	51A	51B	
Number of seeds	69	53	76	140	61	55	67	
Oct 20	Start					Start	Start	
Nov 9	Out					55	(good)	
	roots 1/8"							
Nov 9	32							
10	42	start	start	start	start	start		
11	54							
11	Back into 41°F							
13	Out of 41°F							
15	Into 41°F							
16	57	2	0	0				
17		3	1	1				
18		5	1	2	0			
19		8	1	5	0	0	0	
20	1	11	5	6	5	0	0	
22	3	11	5	10	14	0	5	
23	4	11	5	10	16	0	6	

5 germinated seeds planted in 327 } Nov 10
 17 " " " " } (in flower boxes)

{ Stratify for 7 days and germinate in 327
 for 3 days and record.

An

58
16

Glandulosa 41°F

Number of seeds 137 Days

			Germination	
Date	Time	Temp	Cum	Decayed Cum
March 10	8AM	Started		0
"	11 8AM	Into 41°F	0	1
"	13 5PM	Into 32°F	0	1
"	18	Into 41°F	0	6
"	20	" 32°F	0	6
"	25	" 41°F	5	11
"	27	"	17	11
Apr.	1	"	17	16
"	3	"	58	16
"	8	"	63	21
"	10	" 32°F	94	22
"	11	" 32°F	97	25
"	15	Into 41°F	98	25
"	17		98	25
			end	15 ungerminated

SGS - Jar

Effect of temp. on seed and seedlings

Temperatures

Soaked seed

Roots 1/4

Seed and seedling 2

Roots 1/4

Hypocotyls Growing

Date April 2 12:15 AM

Apr. 2 8°F 9hrs

?

killed

killed

killed

9 AM

end

Ami

$\frac{1}{185} = 54054$

154
106
560

Glandulosa Damp Sand in bottles 41°F

$\frac{1}{260} = .38461$

on basis of 41°F
no gen

Total: 218500X		Glandulosa		Shasta		Days
	Into 41°F	%	%	Both		
Dec 10				0		0
Dec 27	8 AM Out	into 327 0		7		7
Dec 29	5 AM 25	into 414 11	0	7		14
Jan 5	8 AM 31	into 327 17 14	0	0		14
Jan 6	8 AM 91	327 49 42	5	2		14
Jan 7	5 P.M. 103	into 41 55 47	20	8		14
Jan 14	8 AM 113	into 327 61 52	27	10		21
Jan 15	8 AM 135	7362 36	36	14		21
"	17 5 P.M. 157	into 41 85 72	47	18		21
"	24 8 AM 158	into 327 85 72	47	18		28
"	25 " 166	90 76	49	19		28
"	26 " 176	95 81	53	20		28
"	27 " 179	97 82	55	21		28
"	29 " 181	(29 seed left) 83	55	21		28
"	31 " 181	98 83	58	22		28
Fed 5	181	83	58	22		32
Discarded because of decay 8						
"	7	182	98 83	64	25	32
"	12	182	83	64	25	37
"	14	183	99 84	77	30	37
"	19	183	84	78	30	42
"	21	184	99 84	96	37	42
"	26	185	100 85	100	38	47
"	28	185	85	104	40	47
Mar. 4	185	85	106	41	41	51
Mar. 6	(end)		113	43	51	51
The next	→ 33 decayed					
March	11		113		56	56
March	13		120	46	56	56
	18		120		61	61
	20		123	47	61	61
	27		125	48	66	66
April	3		128	49	71	71
			(end)			

Outer counts removed Dec 15 and kept at room temp 5 days; on Dec 20 into 39°F Cor. Shasta

Date	Count	%	Days	Decayed
Dec 27	18	9	8	7
Jan 2	73	33	31	
Jan 3	85	38	36	14
Jan 10	122	57	51	21
Jan 17	146	65	61	28
Jan 24	154	69	65	35
Jan 31	155	69	65	42

238

738

End of experiment on Jan 31

Correction to adjust to 41°F .10677

130 decayed

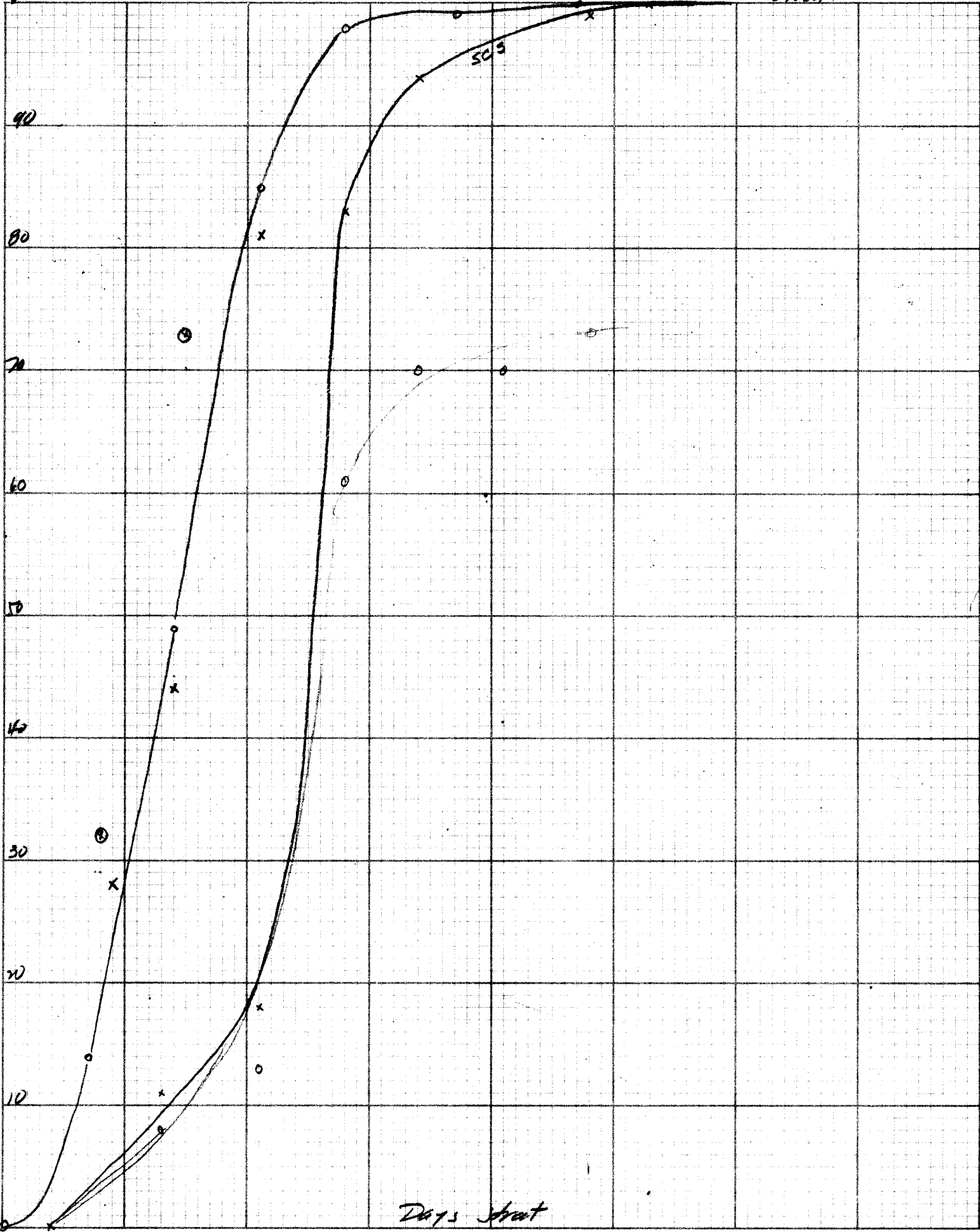
$\frac{1}{238} = 4202$

$\frac{1}{18} = 458715$

100

Glandulosa 41°F

Percent Germination



Days Start

10

20

30

50

60

76