

April 1945  $H_2O_2$  - strat at  $77^\circ F$  (327)

Soaking time		Concentration $H_2O_2$ →				
Days	Hrs	100 3.0	50 1.5	Per cent $H_2O_2$ 0.3	1 0.03	0.1 0.003
		Par cent germination Basis average above 60 seeds this is inadequate. But trend apparent				
	3	0	0	12	0	0
1		0	0	8	0	0
3		0	0	1	13	6
5		0	0	0	50	24
7		0	0	0	37	3
10		0	0	0	76	12

end

Effect  $H_2O_2$  and strat. at  $45^\circ F$  &  $41^\circ F$

Seed soaked in  $H_2O$  3 days then into 250 cc  $H_2O$  containing 2cc  $H_2O_2$  and then stored at temps

Storage time days	" 1% solution	
	$45^\circ F$ ger %	$41^\circ F$ ger %
1	29	52
2	40	48
4	50	40
5	70	40
8	89 $\frac{3}{16}$ " roots when out	
12	100	55

stunted but prob will grow in soil.

$H_2O_2$  more effective at  $45^\circ F$  than  $41^\circ F$

Germination of seed in 1% solution  $H_2O_2$  and stored at  $33^\circ F$  for 47 days gave 99 per cent germination (basis only 69 seeds).

H<sub>2</sub>O<sub>2</sub>

87  
14  
April 16/45

Concentrations

H<sub>2</sub>O<sub>2</sub> not renewed daily

}	H <sub>2</sub> O <sub>2</sub>	100 cc	50cc	10	1	.1	}	at	72°F
	H <sub>2</sub> O	0	50	90	99	99.9			66°F

71/41
327
(87) (85)
14 31
end 3v
end

Seed not soaked, treated dry

3hrs  
8hrs  
24  
48  
72

3.0%	1.5%	0.3	.03	.003
100%	50%	10%	1%	0.1%

71 54 42  
69V notice germination  
4th Taken out  
April 21 7out 10% 10% 0.1%  
April 21 0 0 7 3 1 2  
" 23 0 - 24 49 21  
" 24 0 - 26 48 10 24  
" 26 0 27 50 10 28  
grad. all dead

April 16 9:50 AM  
" 16 1 PM  
" 18  
" 20  
" 21  
" 23

← Into H<sub>2</sub>O<sub>2</sub>  
← 1st out  
0 0 - 0 - 0 - 0 - 0 - 0  
← dead → 4 4 6 0 - 0 - 0 -  
5 9 0 - 0 -  
7 12 0 - 0 -  
end. end.

50V 47 40V 41 36V  
5th Sample %  
April 23 0 - 8 20T %  
" 26 0 - 15 37 3  
" 28 all 15 37 3  
" 30 dead 15 37 3  
end. end.

April 17 BAM  
April 18  
" 20  
" 21  
" 23

2nd out  
(73V) (57V) (39V)  
0 - 0 - 0 - 0 - 0 - 0 - 0  
← dead → 0 - 0 - 0 - 0 -  
0 - 0 -  
6-8 0 - 0 -

(65V) (47) (61)  
4rv 51V  
all 16 injury 38 3 6  
dead 32 1/16 10  
end

April 19 11 AM  
" "  
" 20  
" 21  
" 23

3rd out (45V) (46V) (89V)  
~~X~~ ~~X~~ 0 - 2 1/4 0 -  
killed 0 - 6 13 T  
0 - 6 13 3 3  
1 - 6 13 5 6  
end. end

May 2 6 12 end.

(end)

Concentration  $H_2O_2$

$$\frac{100}{v} = \frac{v}{0.11907}$$

.03% roughly

$H_2O_2$  — A

Seed soaked @ 48°F for 3 days

Then into 250cc  $H_2O$  containing 7cc  $H_2O_2$   
on April 19 -  $H_2O_2$  not renewed.

April 19 stored @ 45°F 41°F  
" " 0 — 0 —

April 20 1st sample

(70) (76)  
(66V) % (75V) %

April 20 0 — 0 —  
" 23 15 23 35 47  
" 24 19 29 36 48  
" 26 19 end 29 39 52

April 21 2nd sample

(79) (60)  
(76V) % (59V) %

April 21 0 — 0 —  
" 23 20 — 16 73 39  
" 24 26 34 27 46  
" 26 30 40 end 28 52

$H_2O_2$  renewed ↘

April 23 3rd sample

(100 95V) % (87 84V)

April 23 0 — 0 —  
" 24 2 1/2 2 3 4  
" 26 19 20 33 39  
" 28 42 44 34 40  
" 30 46 48 34 52  
" 30 47 end 34 52

H<sub>2</sub>O<sub>2</sub>  
1cc H<sub>2</sub>O<sub>2</sub> in 100cc H<sub>2</sub>O

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	B			A cont	
	33°F	44°F	77°F	41°F	45°F
April 23	(76) ← 73V into H <sub>2</sub> O <sub>2</sub>	(68) 4V	(75) 70V →	(62) (58V)	(94) (90V)
April 24	out	out	out	out	out
" 26	0 -	0 -	1	15H 26	59H 65
" 28	0 -	0 -	1	22 38	63 70
" 30	0 -	1 -	1	23 40	63 70
	end.	end.	end	end	end.
			H <sub>2</sub> O <sub>2</sub> received		
		(58) (54V)			(79, 74V)
April 26	out		%		out roots 3/16
" 28			8 15		59 80
" 30			8 15		63 85
May 1			10 18		66 89
May 5			12 22		
	(81)	(89)		(70)	(124)
April 30	(75V)	(85V)		(65V) %	(118V)
" 30	%	%			118 roots 3/16
May 1	4H 5	15H 18		24H 37	stunted but probably
May 5	6H 8	17H 20		36H 55	will grow in soil
				86	
May 1	(67 61V)	(69 64V)			33°F 41°F
May 2	0 -	0 -	0	June 4	(74 69V)
May 5	7H 11	5H 8		June 4	0 - %
" 9	15H 25	8H 13		June 6	55, 80
" 12	15 end 15	11H 17		" 7	57 86
				" 9	68V 99
May 5	(56 52V)	(79 74V)			
" 9	8H 15	9 12			
" 12	11H 21	14H 19			
	end	end			
June					