AH 534.76: LAND DEVELOPMENT AND DRAINAGE TILE

LEVELING COST

Item	Per Acre
Native Land	$350 - $700
Ripping and Relieving	$380 - $580
Touch-Up Leveling—Laser	$100 - $125
Rescaping	$60 - $80

EARTH MOVING

Size	Cost
Per cubic yard	$.55 - $.65

RIPPING

Item	Cost
Clay 5' deep	$325 - $375
Clay 6' deep	$350 - $400
Loamy or sandy soil	$225 - $275
Hard pan 4' - 6' deep	$350 - $650

NOTE:

1. Ripping costs are based on four-foot centers.
2. Ripping cost with a slip plow attached to shank (superior mixing and breaking of soils) is typically done on six-foot centers, and the cost is equal to standard ripping on four-foot centers.
3. Typically takes ten hours to rip seven acres on four-foot centers.

LAND DEVELOPMENT AND DRAINAGE TILE

Recent drainage tile installations use corrugated plastic tubing. The spacing varies from 100 feet to 400 feet on centers. The older type installation includes perforated tile with wide trenches. A 5-inch corrugated plastic drain tubing is installed in a 12-inch trench versus a 24-inch to 27-inch trench for the older type installation. The cost for gravel fill is much less because of the narrower trench.

The cost installed of 5-inch corrugated plastic tubing on 400-foot centers, 7 1/2-feet deep including sump and pump, and trench width of 12 inches with gravel fill over the pipe is as follows.

DRAINAGE TILE

Loamy Soils	$465 per acre
Rocky Soils	$630 per acre

Reduce the above cost 25 percent if system lacks a pump or sump.
Increase the above cost 25 percent if the system has 100-foot centers, with 4-inch lines.

TILE COSTS - INSTALLED

Includes trenching and perforated pipe packed in 3" pee gravel

Pipe Size	Cost
4"	$2.25
5"	2.50
6"	2.75
8"	3.55
10"	5.25
12"	6.50
15"	9.00

The above costs are for a standard system on level accessible soil. Costs are higher for undulating and remote farmland.

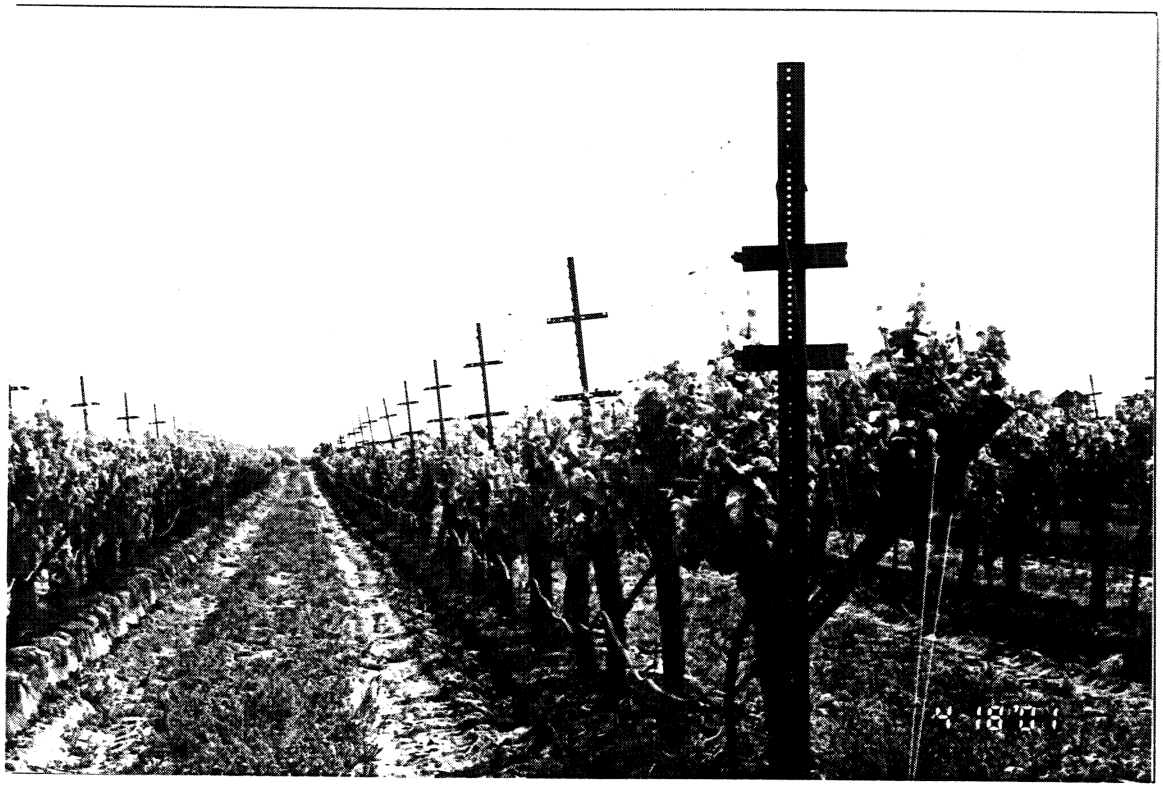
AH 534.77: VINEYARD STAKES AND TRELLISES

Vineyard stakes and trellises costs vary due to the following:

- Type and quality of material
- Spacing between the rows of vines
- Spacing between the vines within the rows
- Kind of vineyard
- Cost of labor (farm labor or commercial contractor)

This section contains costs on the following:

- Table Grape Trellises
- Raisin Grape Trellises
- Wine Grape Trellises
- Miscellaneous vineyard components



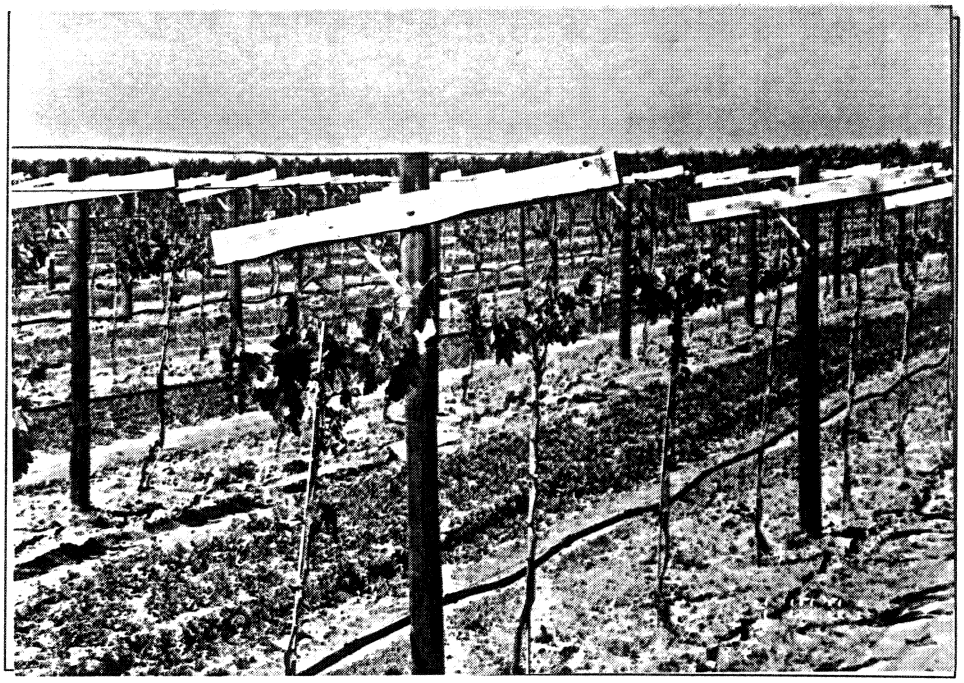
Sun Maid Southside Dry on Vine Trellis

VINEYARD STAKES AND TRELLISES

TABLE GRAPES

SINGLE CROSSARM

Seven-foot stake and 36" to 42" crossarm with four wires (13-gauge)



VINEYARD STAKES AND TRELLISES

TABLE GRAPES

SINGLE CROSSARM

10 FOOT ROWS

	Spacing—6' x 10' or 7 ' x 10' or 8' x 10'		
	Cost Per Unit	Posts Per Acre	Cost Per Acre
Post and crossarm assembly	$5.15		
Every 15 feet	$5.15	290	$1,493
Every 18 feet	$5.15	242	$1,246
Every 21 feet	$5.15	207	$1,066
Every 24 feet	$5.15	182	$937
Four wires			$320
End post with anchor (installed)	$26.00	14	$364
End post without anchor (installed)	$18.00	14	$252

11 FOOT ROWS

	Spacing—6' x 11' or 7 ' x 11' or 8' x 11'		
	Cost Per Unit	Posts Per Acre	Cost Per Acre
Post and crossarm assembly	$5.15		
Every 15 feet	$5.15	264	$1,360
Every 18 feet	$5.15	220	$1,133
Every 21 feet	$5.15	188	$968
Every 24 feet	$5.15	165	$850
Four wires			$290
End post with anchor (installed)	$26.00	13	$338
End post without anchor (installed)	$18.00	13	$234

12 FOOT ROWS

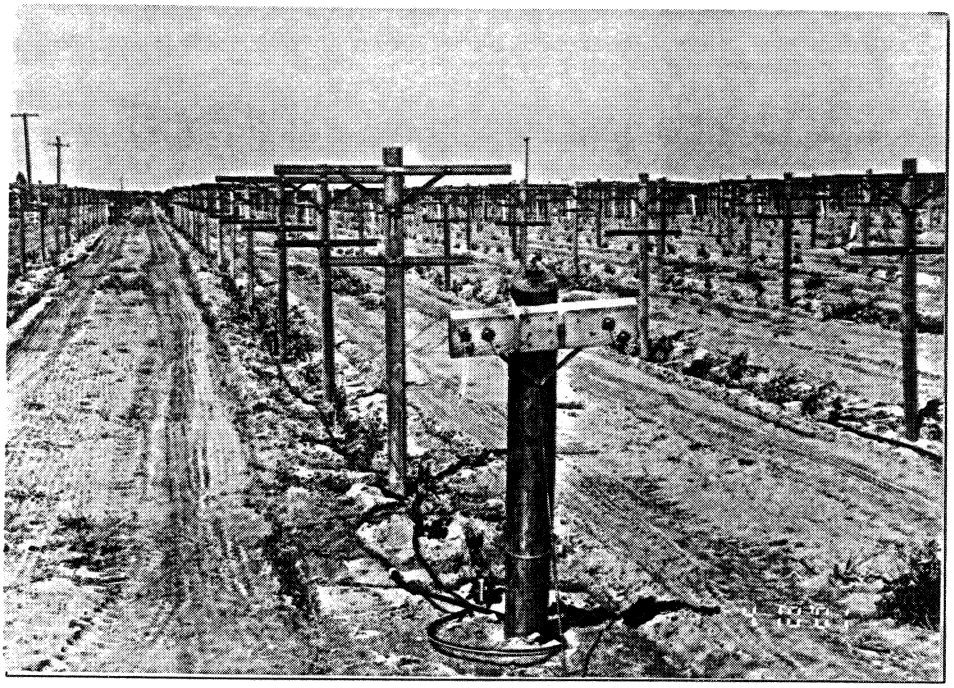
	Spacing—6' x 12' or 7 ' x 12' or 8' x 12'		
	Cost Per Unit	Posts Per Acre	Cost Per Acre
Post and crossarm assembly	$5.15		
Every 15 feet	$5.15	242	$1,246
Every 18 feet	$5.15	201	$1,035
Every 21 feet	$5.15	172	$885
Every 24 feet	$5.15	151	$778
Four wires			$264
End post with anchor (installed)	$26.00	12	$312
End post without anchor (installed)	$18.00	12	$216

Based on 600 foot rows

VINEYARD STAKES AND TRELLISES

TABLE GRAPES

DOUBLE CROSSARM



Seven-foot stake, 42" top crossarm, 24" to 30" lower crossarm, with six wires (13-gauge)

VINEYARD STAKES AND TRELLISES

TABLE GRAPES

DOUBLE CROSSARM

10 FOOT ROWS

	Spacing—6' x 10' or 7 ' x 10' or 8' x 10'		
	Cost Per Unit	Posts Per Acre	Cost Per Acre
Post and crossarm assembly	$6.00		
Every 15 feet	$6.00	290	$1,740
Every 18 feet	$6.00	242	$1,452
Every 21 feet	$6.00	207	$1,242
Every 24 feet	$6.00	182	$1,092
Six wires			$477
End post with anchor (installed)	$26.00	14	$364
End post without anchor (installed)	$18.00	14	$252

11 FOOT ROWS

	Spacing—6' x 11' or 7 ' x 11' or 8' x 11'		
	Cost Per Unit	Posts Per Acre	Cost Per Acre
Post and crossarm assembly	$6.00		
Every 15 feet	$6.00	264	$1,584
Every 18 feet	$6.00	220	$1,320
Every 21 feet	$6.00	188	$1,128
Every 24 feet	$6.00	165	$990
Six wires			$435
End post with anchor (installed)	$26.00	13	$338
End post without anchor (installed)	$18.00	13	$234

12 FOOT ROWS

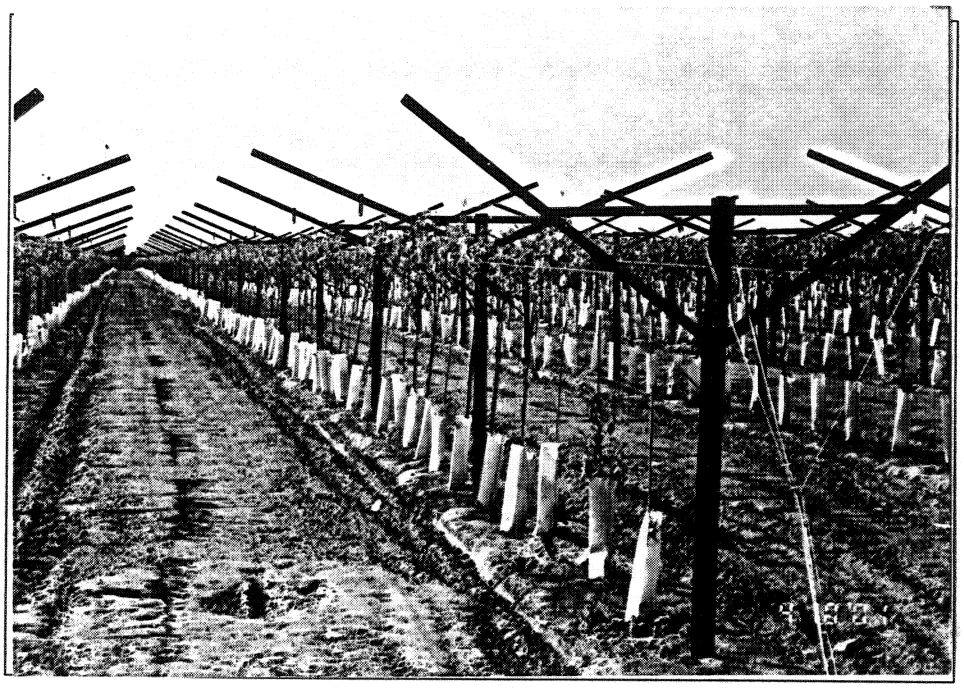
	Spacing—6' x 12' or 7 ' x 12' or 8' x 12'		
	Cost Per Unit	Posts Per Acre	Cost Per Acre
Post and crossarm assembly	$6.00		
Every 15 feet	$6.00	242	$1,452
Every 18 feet	$6.00	201	$1,206
Every 21 feet	$6.00	172	$1,032
Every 24 feet	$6.00	151	$906
Six wires			$400
End post with anchor (installed)	$26.00	12	$312
End post without anchor (installed)	$18.00	12	$216

Based on 600 foot rows

VINEYARD STAKES AND TRELLISES

TABLE GRAPES/RAISINS

OPEN GABLE TRELLIS



Eight-foot steel post, 4' angle iron on each side of post forming V with the tops approximately 5' to 6' apart, with 3 to 4 wires (13-gauge) on each side

VINEYARD STAKES AND TRELLISES

TABLE GRAPES/RAISINS

OPEN GABLE TRELLIS

10 FOOT ROWS

	Spacing—6' x 10' or 7 ' x 10' or 8' x 10'		
	Cost Per Unit	Posts Per Acre	Cost Per Acre
Post and crossarm assembly	$9.45		
Every 18 feet	$9.45	242	$2,287
Every 21 feet	$9.45	207	$1,956
Every 24 feet	$9.45	182	$1,720
Six wires			$477
Eight wires			$639
End post with anchor (installed)	$26.00	14	$364

11 FOOT ROWS

	Spacing—6' x 11' or 7 ' x 11' or 8' x 11'		
	Cost Per Unit	Posts Per Acre	Cost Per Acre
Post and crossarm assembly	$9.45		
Every 18 feet	$9.45	220	$2,079
Every 21 feet	$9.45	188	$1,777
Every 24 feet	$9.45	165	$1,560
Six wires			$435
Eight wires			$582
End post with anchor (installed)	$26.00	13	$338

12 FOOT ROWS

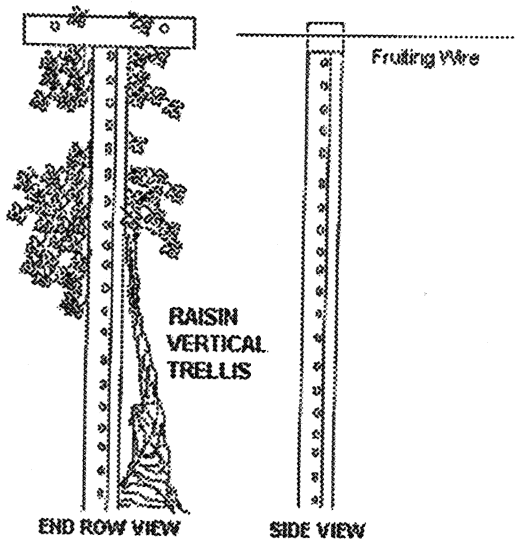
	Spacing—6' x 12' or 7 ' x 12' or 8' x 12'		
	Cost Per Unit	Posts Per Acre	Cost Per Acre
Post and crossarm assembly	$9.45		
Every 18 feet	$9.45	201	$1,900
Every 21 feet	$9.45	172	$1,625
Every 24 feet	$9.45	151	$1,427
Six wires			$400
Eight wires			$533
End post with anchor (installed)	$26.00	12	$312

Based on 600 foot rows

VINEYARD STAKES AND TRELLISES

RAISIN GRAPES

VERTICAL TRELLIS



Commonly used on raisins with 12' spacing.

Materials: 8' wooden end posts with 7' medium T stakes at each vine. A single 24" metal crossarm with two 13-gauge wires.

VINEYARD STAKES AND TRELLISES

RAISIN GRAPES

TRELLIS

10 FOOT ROWS

	Cost Per Unit	Posts Per Acre	Cost Per Acre		
			5' x 10'	6' x 10'	7' x 10'
Light 7' stake and 24" crossarm	$2.30				
Every 5 feet	$2.30	871	$2,003		
Every 6 feet	$2.30	726		$1,670	
Every 7 feet	$2.30	622			$1,430
Two wires			$160	$160	$160
End post	$18.00	14	$252	$252	$252
Light 7' stake with no crossarm	$1.65		$1,437	$1,198	$1,026
One wire			$80	$80	$80

11 FOOT ROWS

	Cost Per Unit	Posts Per Acre	Cost Per Acre		
			5' x 11'	6' x 11'	7' x 11'
Light 7' stake and 24" crossarm	$2.30				
Every 5 feet	$2.30	792	$1,822		
Every 6 feet	$2.30	660		$1,518	
Every 7 feet	$2.30	566			$1,302
Two wires			$144	$144	$144
End post	$18.00	13	$234	$234	$234
Light 7' stake with no crossarm	$1.65		$1,307	$1,089	$934
One wire			$72	$72	$72

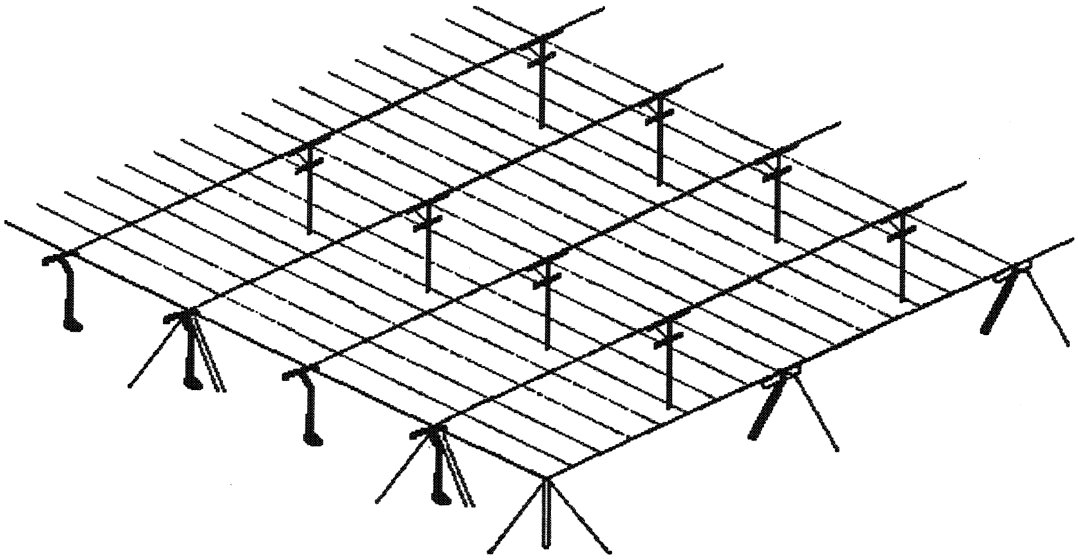
12 FOOT ROWS

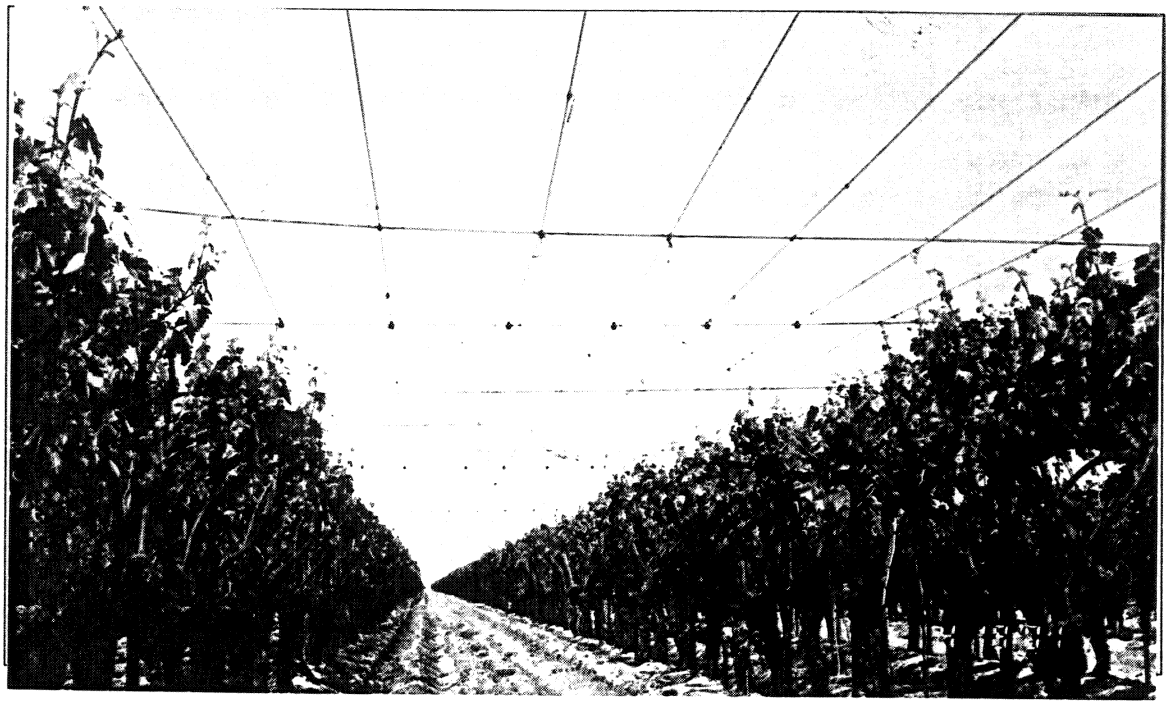
	Cost Per Unit	Posts Per Acre	Cost Per Acre		
			5' x 12'	6' x 12'	7' x 12'
Light 7' stake and 24" crossarm	$2.30				
Every 5 feet	$2.30	726	$1,670		
Every 6 feet	$2.30	605		$1,392	
Every 7 feet	$2.30	518			$1,192
Two wires			$122	$122	$122
End post	$18.00	12	$216	$216	$216
Light 7' stake with no crossarm	$1.65		$1,198	$998	$855
One wire			$61	$61	$61

VINEYARD STAKES AND TRELLISES

RAISIN GRAPES

OVERHEAD DRY ON VINE TRELLIS





Commonly used in 12' row with 6' between vines; occasionally used on 10' and 11' rows; a few 8' and 9' rows.

Materials: Wood post 12' on ends, 9' on sides, 10' wood post every third vine with 36" crossarm, 8 wires per row, and cable support.

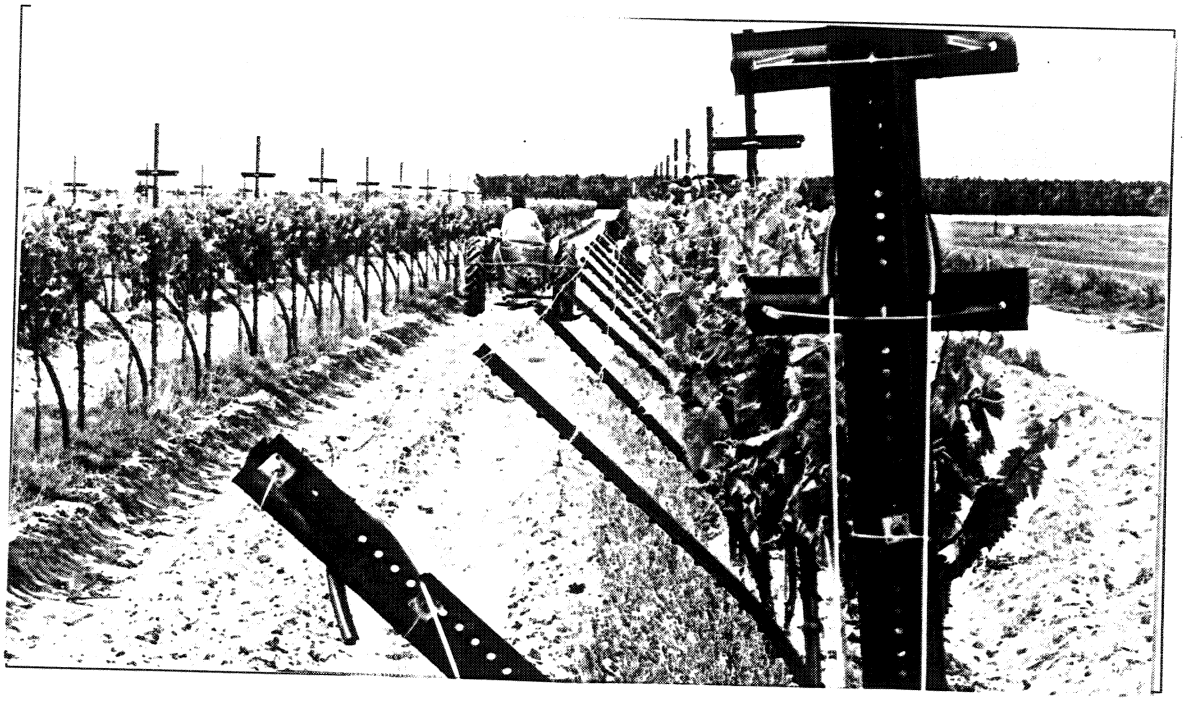
Trellising Cost Per Acre:

$3,400 to $3,800 on 6' x 12' spacing
$3,600 to $4,200 on 10' and 11' rows
$4,200 to $4,700 on 8' and 9' rows

VINEYARD STAKES AND TRELLISES

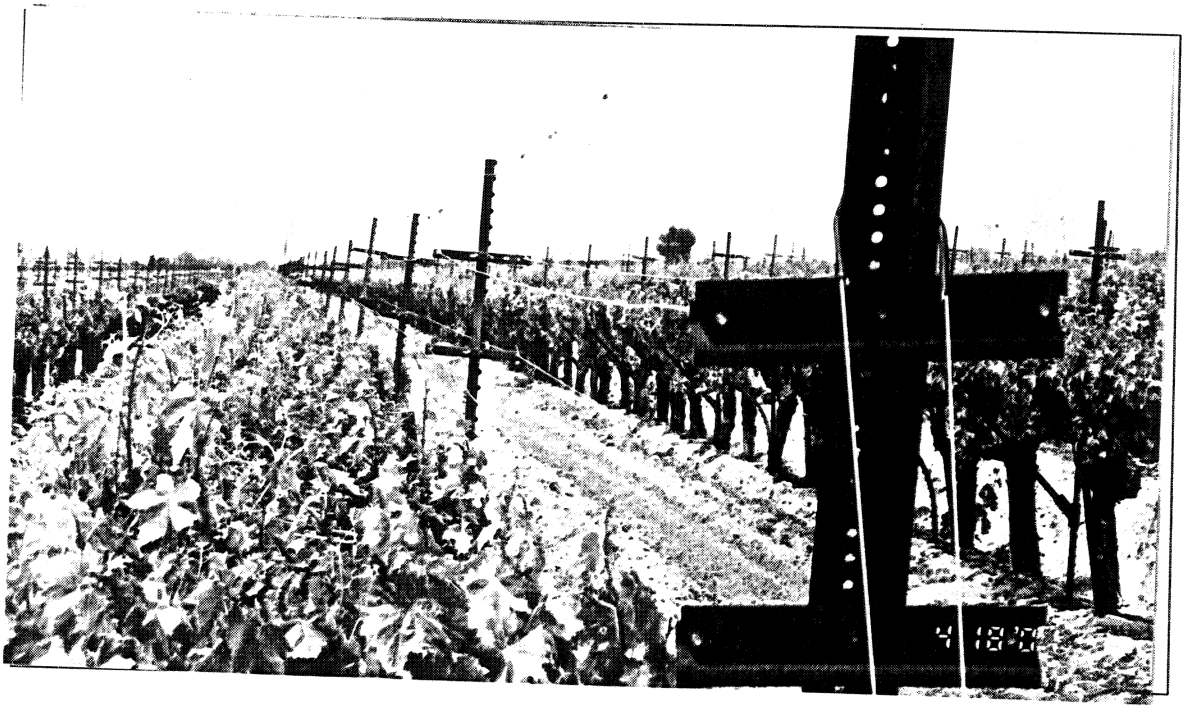
RAISIN GRAPES

SUN MAID SOUTHSIDE DRY ON VINE TRELLIS



8' T-post every 28' with two 10' crossarms and 5 wires. In between T-posts is 2 bent 7' to 8' T-posts with 2 wires. Each vine will have a training stake. Each end has a heavy steel post with anchors.

Cost: **$2,000 to $2,400** for 7' x 12' spacing.

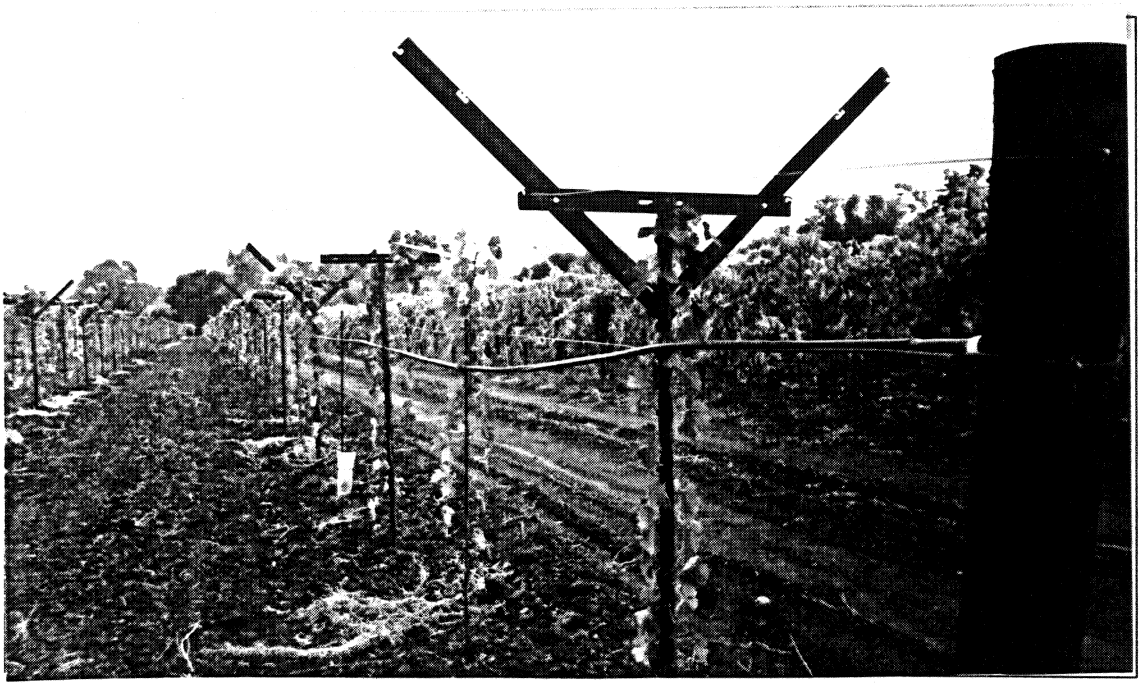


VINEYARD STAKES AND TRELLISES

WINE GRAPES

TRELLIS

T-post with crossarm every vine



T-post and V crossarm

VINEYARD STAKES AND TRELLISES

WINE GRAPES

TRELLIS

8' vertical line post with 4' T-posts in between

8' vertical line post with light grape stakes in between

VINEYARD STAKES AND TRELLISES

WINE GRAPES

TRELLIS

6 FOOT ROWS

	Cost Per Unit	Vines Per Acre		
		1,815	1,452	1,210
		Cost Per Acre		
		4' x 6'	5' x 6'	6' x 6'
22 end posts per acre with anchor	$26	$572	$572	$572
22 end posts per acre without anchor	$18	$396	$396	$396
7' Light T-post (Add 30% for heavy T-post)				
Every vine	$1.65	$2,995	$2,396	$1,996
Every other vine	$.83	$1,506	$1,205	$1,004
Every third vine	$.55	$998	$798	$666
Every fourth vine	$.42	$762	$610	$508
8' Vertical line post				
Every vine	$3.55	$6,443	$5,155	$4,295
Every other vine	$1.78	$3,231	$2,585	$2,154
Every third vine	$1.18	$2,142	$1,713	$1,428
Every fourth vine	$.89	$1,615	$1,292	$1,077
4' Rebar or pencil rod at each vine (between T-post or vertical line)	$.46			
One rebar between posts	$.23	$417	$334	$278
Two rebars between posts	$.30	$545	$436	$363
Three rebars between posts	$.35	$635	$508	$424
24" crossarm (Add 25% for 30" crossarm)				
Every vine	$.85	$1,543	$1,234	$1,028
Every other vine	$.43	$780	$624	$520
Every third vine	$.29	$526	$421	$351
Every fourth vine	$.21	$381	$305	$254
Two wires		$265	$265	$265
Three wires		$398	$398	$398
Four wires		$530	$530	$530
Five wires		$663	$663	$663
Six wires		$796	$796	$796
Seven wires		$928	$928	$928
Eight wires		$1,061	$1,061	$1,061

VINEYARD STAKES AND TRELLISES

WINE GRAPES

TRELLIS

7 FOOT ROWS

	Cost Per Unit	Vines Per Acre			
		1,555	1,245	1,037	889
		Cost Per Acre			
		4' x 7'	5' x 7'	6' x 7'	7' x 7'
20 end posts per acre with anchor	$26	$520	$520	$520	$520
20 end posts per acre without anchor	$18	$360	$360	$360	$360
7' Light T-post (Add 30% for heavy T-post)					
Every vine	$1.65	$2,566	$2,054	$1,711	$1,467
Every other vine	$.83	$1,290	$1,033	$861	$738
Every third vine	$.55	$855	$684	$570	$489
Every fourth vine	$.42	$653	$522	$436	$373
8' Vertical line post					
Every vine	$3.55	$5,520	$4,420	$3,681	$3,156
Every other vine	$1.78	$2,768	$2,216	$1,846	$1,582
Every third vine	$1.18	$1,835	$1,469	$1,224	$1,049
Every fourth vine	$.89	$1,384	$1,108	$923	$791
4' Rebar or pencil rod at each vine (between T-post or vertical line)	$.46				
One rebar between posts	$.23	$358	$286	$238	$204
Two rebars between posts	$.30	$467	$373	$311	$268
Three rebars between posts	$.35	$544	$436	$363	$311
24" crossarm (Add 25% for 30" crossarm)					
Every vine	$.85	$1,322	$1,058	$881	$756
Every other vine	$.43	$669	$535	$446	$382
Every third vine	$.29	$451	$361	$301	$258
Every fourth vine	$.21	$327	$261	$218	$187
Two wires		$227	$227	$227	$227
Three wires		$341	$341	$341	$341
Four wires		$455	$455	$455	$455
Five wires		$569	$569	$569	$569
Six wires		$682	$682	$682	$682
Seven wires		$795	$795	$795	$795
Eight wires		$900	$900	$900	$900

VINEYARD STAKES AND TRELLISES

WINE GRAPES

TRELLIS

8 FOOT ROWS

	Cost Per Unit	Vines Per Acre			
		1,089	907	778	681
		Cost Per Acre			
		5' x 8'	6' x 8'	7' x 8'	8' x 8'
18 end posts per acre with anchor	$26	$468	$468	$468	$468
18 end posts per acre without anchor	$18	$324	$324	$324	$324
7' Light T-post (Add 30% for heavy T-post)					
Every vine	$1.65	$1,797	$1,497	$1,284	$1,124
Every other vine	$.83	$904	$753	$646	$565
Every third vine	$.55	$598	$499	$428	$375
Every fourth vine	$.42	$457	$381	$327	$286
8' Vertical line post					
Every vine	$3.55	$3,866	$3,220	$2,762	$2,417
Every other vine	$1.78	$1,938	$1,614	$1,384	$1,212
Every third vine	$1.18	$1,285	$1,070	$918	$803
Every fourth vine	$.89	$969	$807	$692	$606
4' Rebar or pencil rod at each vine (between T-post or vertical line)	$.46				
One rebar between posts	$.23	$250	$209	$179	$157
Two rebars between posts	$.30	$327	$272	$233	$204
Three rebars between posts	$.35	$381	$317	$272	$238
24" crossarm (Add 25% for 30" crossarm)					
Every vine	$.85	$926	$771	$661	$578
Every other vine	$.43	$468	$390	$335	$292
Every third vine	$.29	$316	$263	$225	$197
Every fourth vine	$.21	$229	$190	$163	$143
Two wires		$199	$199	$199	$199
Three wires		$299	$299	$299	$299
Four wires		$398	$398	$398	$398
Five wires		$498	$498	$498	$498
Six wires		$599	$599	$599	$599
Seven wires		$698	$698	$698	$698
Eight wires		$797	$797	$797	$797

VINEYARD STAKES AND TRELLISES

WINE GRAPES

TRELLIS

9 FOOT ROWS

	Cost Per Unit	Vines Per Acre			
		968	807	691	605
		Cost Per Acre			
		5' x 9'	6' x 9'	7' x 9'	8' x 9'
16 end posts per acre with anchor	$26	$416	$416	$416	$416
16 end posts per acre without anchor	$18	$288	$288	$288	$288
7' Light T-post (Add 30% for heavy T-post)					
Every vine	$1.65	$1,598	$1,332	$1,140	$998
Every other vine	$.83	$803	$670	$573	$502
Every third vine	$.55	$532	$444	$380	$332
Every fourth vine	$.42	$407	$339	$290	$254
8' Vertical line post					
Every vine	$3.55	$3,436	$2,864	$2,453	$2,148
Every other vine	$1.78	$1,723	$1,436	$1,230	$1,077
Every third vine	$1.18	$1,142	$952	$815	$714
Every fourth vine	$.89	$861	$718	$615	$538
4' Rebar or pencil rod at each vine (between T-post or vertical line)	$.46				
One rebar between posts	$.23	$222	$186	$159	$139
Two rebars between posts	$.30	$290	$242	$207	$181
Three rebars between posts	$.35	$338	$282	$241	$211
24" crossarm (Add 25% for 30" crossarm)					
Every vine	$.85	$822	$686	$587	$514
Every other vine	$.43	$416	$347	$297	$260
Every third vine	$.29	$281	$234	$200	$175
Every fourth vine	$.21	$203	$169	$145	$127
Two wires		$178	$178	$178	$178
Three wires		$267	$267	$267	$267
Four wires		$356	$356	$356	$356
Five wires		$445	$445	$445	$445
Six wires		$534	$534	$534	$534
Seven wires		$623	$623	$623	$623
Eight wires		$712	$712	$712	$712

VINEYARD STAKES AND TRELLISES

WINE GRAPES

TRELLIS

10 FOOT ROWS

	Cost Per Unit	Vines Per Acre			
		871	726	622	544
		Cost Per Acre			
		5' x 10'	6' x 10'	7' x 10'	8' x 10'
14 end posts per acre with anchor	$26	$364	$364	$364	$364
14 end posts per acre without anchor	$18	$252	$252	$252	$252
7' Light T-post (Add 30% for heavy T-post)					
Every vine	$1.65	$1,437	$1,198	$1,026	$898
Every other vine	$.83	$723	$603	$516	$452
Every third vine	$.55	$480	$400	$342	$299
Every fourth vine	$.42	$366	$305	$261	$229
8' Vertical line post					
Every vine	$3.55	$3,092	$2,577	$2,208	$1,931
Every other vine	$1.78	$1,550	$1,292	$1,107	$968
Every third vine	$1.18	$1,028	$857	$734	$642
Every fourth vine	$.89	$775	$646	$554	$484
4' Rebar or pencil rod at each vine (between T-post or vertical line)	$.46				
One rebar between posts	$.23	$200	$167	$143	$125
Two rebars between posts	$.30	$261	$218	$187	$163
Three rebars between posts	$.35	$304	$254	$218	$190
24" crossarm (Add 25% for 30" crossarm)					
Every vine	$.85	$740	$617	$528	$462
Every other vine	$.43	$375	$312	$264	$231
Every third vine	$.29	$253	$211	$180	$158
Every fourth vine	$.21	$183	$152	$131	$114
Two wires		$160	$160	$160	$160
Three wires		$240	$240	$240	$240
Four wires		$320	$320	$320	$320
Five wires		$400	$400	$400	$400
Six wires		$480	$480	$480	$480
Seven wires		$560	$560	$560	$560
Eight wires		$640	$640	$640	$640

VINEYARD STAKES AND TRELLISES

WINE GRAPES

TRELLIS

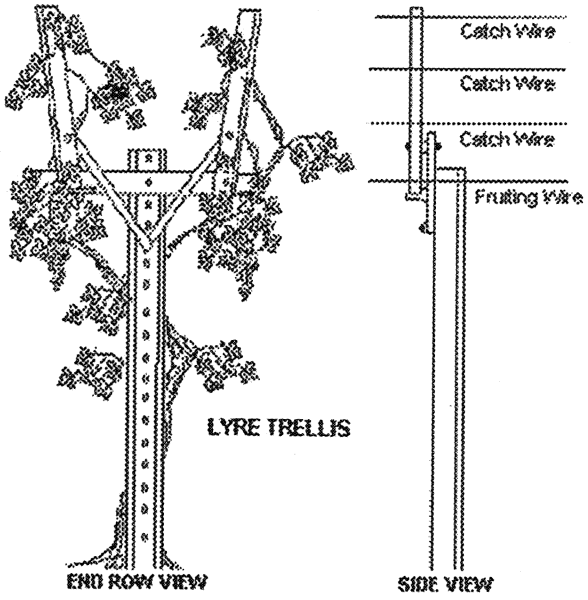
11 FOOT ROWS

	Cost Per Unit	Vines Per Acre			
		792	660	566	495
		Cost Per Acre			
		5' x 11'	6' x 11'	7' x 11'	8' x 11'
13 end posts per acre with anchor	$26	$338	$338	$338	$338
13 end posts per acre without anchor	$18	$234	$234	$234	$234
7' Light T-post (Add 30% for heavy T-post)					
Every vine	$1.65	$1,306	$1,089	$934	$817
Every other vine	$.83	$657	$548	$470	$411
Every third vine	$.55	$436	$363	$311	$272
Every fourth vine	$.42	$333	$277	$238	$208
8' Vertical line post					
Every vine	$3.55	$2,812	$2,343	$2,009	$1,757
Every other vine	$1.78	$1,409	$1,175	$1,007	$881
Every third vine	$1.18	$935	$779	$668	$584
Every fourth vine	$.89	$705	$587	$504	$441
4' Rebar or pencil rod at each vine (between T-post or vertical line)	$.46				
One rebar between posts	$.23	$182	$152	$130	$113
Two rebars between posts	$.30	$238	$198	$170	$149
Three rebars between posts	$.35	$277	$231	$198	$173
24" crossarm (Add 25% for 30" crossarm)					
Every vine	$.85	$673	$561	$481	$421
Every other vine	$.43	$337	$281	$241	$210
Every third vine	$.29	$229	$191	$164	$143
Every fourth vine	$.21	$166	$138	$118	$103
Two wires		$145	$145	$145	$145
Three wires		$218	$218	$218	$218
Four wires		$290	$290	$290	$290
Five wires		$362	$362	$362	$362
Six wires		$436	$436	$436	$436
Seven wires		$508	$508	$508	$508
Eight wires		$580	$580	$580	$580

VINEYARD STAKES AND TRELLISES

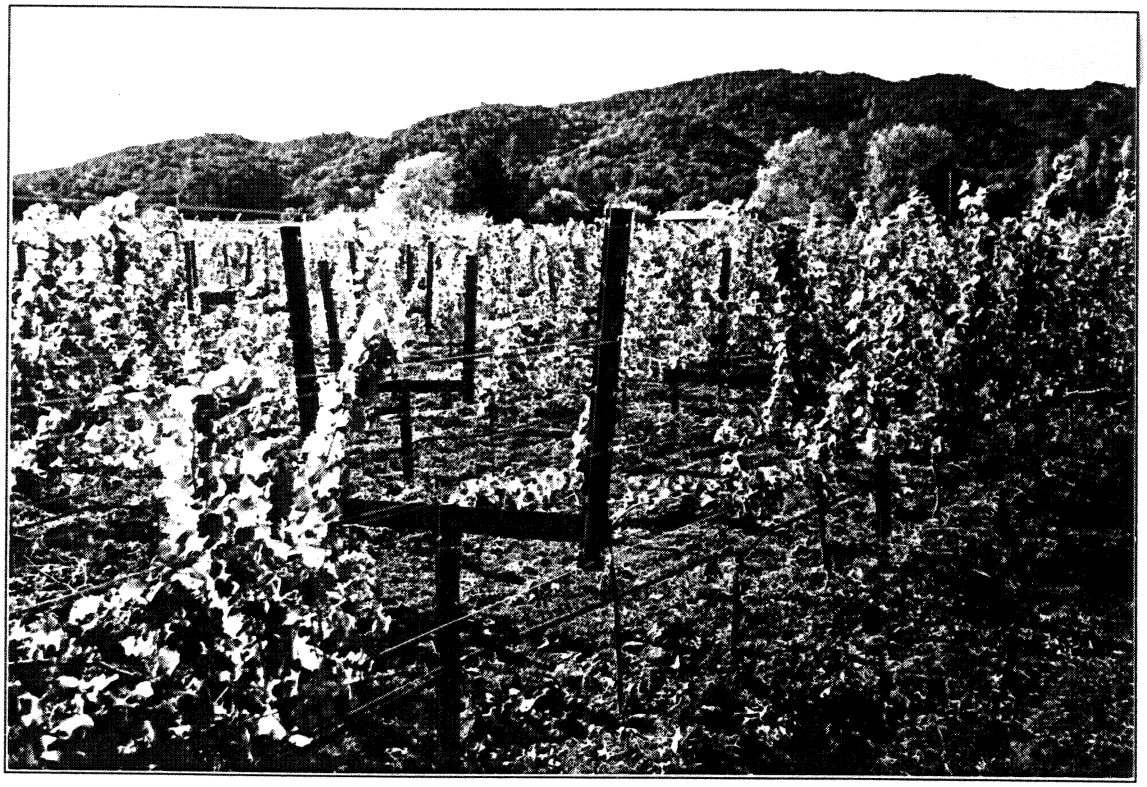
WINE GRAPES

LYRE TRELLIS



Commonly used in wide row of 11' to 12'.

Materials: Heavy steel or wood end posts; heavy and medium T stakes with anchor plates; 8' to 12' gauge wires on metal open Lyre crossarms with a typical width of 42" at the top; 6 to 10 wires.



VINEYARD STAKES AND TRELLISES

WINE GRAPES

LYRE SYSTEM

11 FOOT ROWS

	Cost Per Unit	Vines Per Acre			
		792	660	566	495
		Cost Per Acre			
		5' x 11'	6' x 11'	7' x 11'	8' x 11'
13 end posts per acre with anchor	$26	$338	$338	$338	$338
13 end posts per acre without anchor	$18	$234	$234	$234	$234
Heavy steel stake with open lyre crossarm					
Every vine	$9.00				
Every other vine	$4.50	$3,564	$2,970	$2,547	$2,227
Every third vine	$3.00	$2,376	$1,980	$1,698	$1,485
Every fourth vine	$2.25	$1,782	$1,485	$1,273	$1,113
4' Rebar or pencil rod at each vine (between lyre crossarm)	$.46				
One rebar between lyres	$.23	$182	$152	$130	$114
Two rebars between lyres	$.30	$238	$198	$170	$148
Three rebars between lyres	$.35	$277	$231	$198	$173
Six wires		$436	$436	$436	$436
Seven wires		$508	$508	$508	$508
Eight wires		$580	$580	$580	$580
Nine wires		$652	$652	$652	$652
Ten wires		$724	$724	$724	$724

VINEYARD STAKES AND TRELLISES

WINE GRAPES

LYRE SYSTEM

12 FOOT ROWS

	Cost Per Unit	Vines Per Acre			
		726	605	518	454
		Cost Per Acre			
		5' x 12'	6' x 12'	7' x 12'	8' x 12'
12 end posts per acre with anchor	$26	$312	$312	$312	$312
12 end posts per acre without anchor	$18	$216	$216	$216	$216
Heavy steel stake with open lyre crossarm					
Every vine	$9.00				
Every other vine	$4.50	$3,267	$2,722	$2,331	$2,043
Every third vine	$3.00	$2,178	$1,815	$1,554	$1,362
Every fourth vine	$2.25	$1,633	$1,361	$1,165	$1,021
4' Rebar or pencil rod at each vine (between lyre crossarm)	$.46				
One rebar between lyres	$.23	$167	$139	$119	$104
Two rebars between lyres	$.30	$218	$182	$155	$136
Three rebars between lyres	$.35	$254	$212	$181	$159
Six wires		$399	$399	$399	$399
Seven wires		$466	$466	$466	$466
Eight wires		$533	$533	$533	$533
Nine wires		$600	$600	$600	$600
Ten wires		$667	$667	$667	$667

VINEYARD STAKES AND TRELLISES

MISCELLANEOUS

COMPONENT COSTS TO CALCULATE COSTS PER ACRE

WIRE PRICE PER ACRE

Based on 10' spacing between rows of vines and 13 gauge wire	
1 wire	$80
2 wire	$160
3 wire	$240
4 wire	$320
5 wire	$400

METAL STAKES AND CROSSARMS

T-Post Stakes and Training Stakes			Metal Crossarms With U Bolts (Medium Grade)	
7'	.95 lbs/ft	$1.65	6"	$.40
7'	1.25 lbs/ft	$2.15	12"	$.57
6'	.95 lbs/ft	$1.25	18"	$.70
6'	1.25 lbs/ft	$1.70	24"	$.85
5'	.95 lbs/ft	$1.10	30" to 34"	$1.10
4'	Rebar Training Stake	$.46	36"	$1.65
4'	¼" Steel Training Stake	$.36	42"	$1.95

Heavy duty elaborate galvanized crossarms can run 40 to 50 percent more.

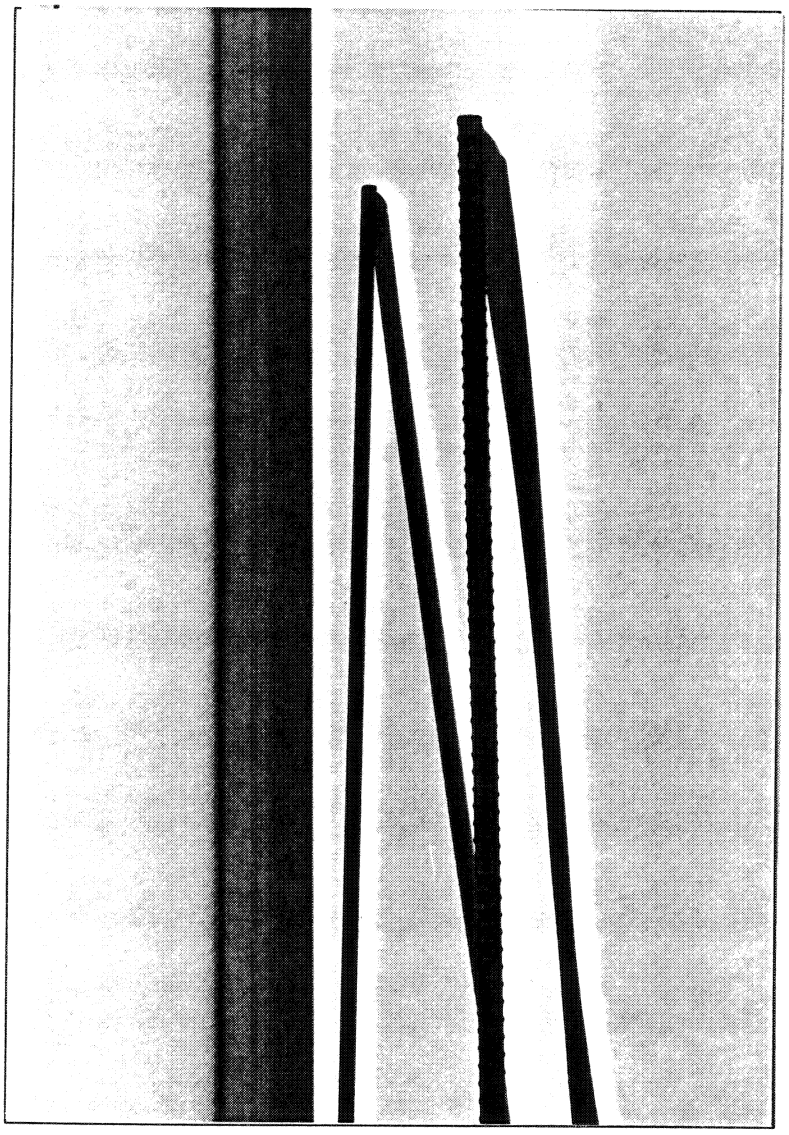
WOOD STAKES AND CROSSARMS

Stakes			Crossarms With Clips		Crossarms With U-Bolts	
5'	1 ¾" sq	$1.21	12"	$.45	12"	$.45 - $.55
6'	1 ¾" sq	$1.48	24"	$.60	24"	$.75 - $.90
7'	1 ¾" sq	$1.79	30"	$.70	30"	$.85 - $.95
8'	3" to 4"	$2.75 – $3.50	36"	$.85	36"	$.95 - $1.05

Price varies with quality

VINEYARD STAKES AND TRELLISES

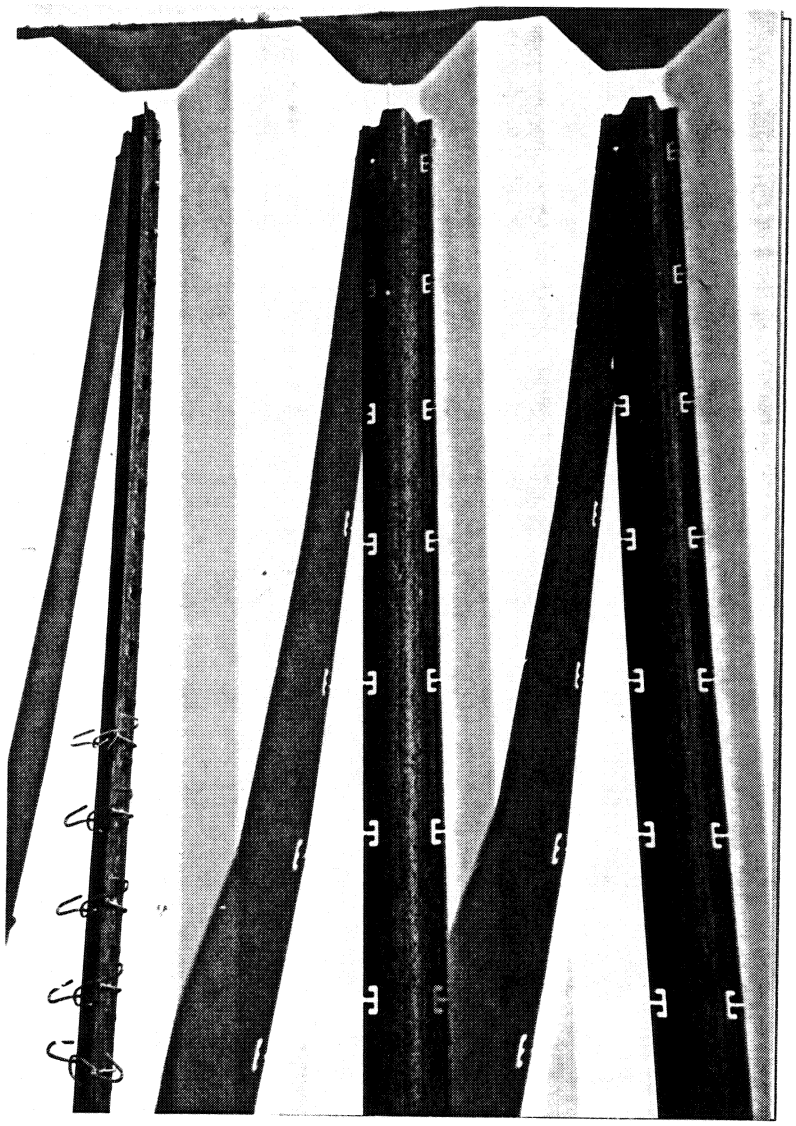
MISCELLANEOUS



4' Pencil rod and rebar
$.36 to $.46 each

VINEYARD STAKES AND TRELLISES

MISCELLANEOUS



T-post with J.R. wire clips

7' heavy T-post: **$2.00** installed
7' light T-post: **$1.65** installed

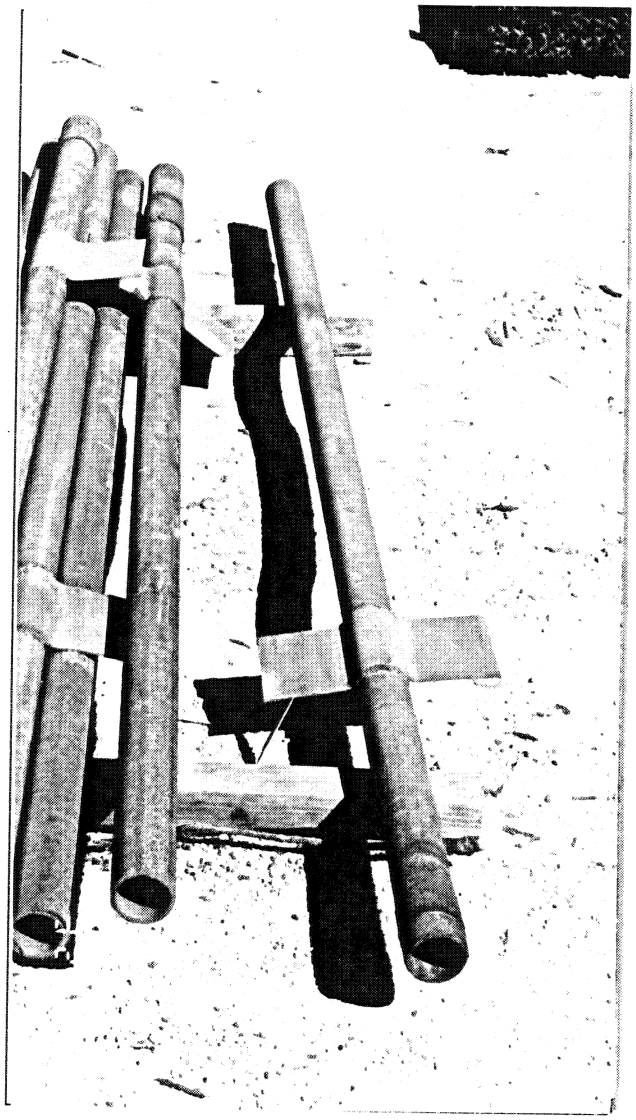
J.R. clips: **$.15** each

Vertical line post with wire slots

8' Vertical line post: **$3.55** installed

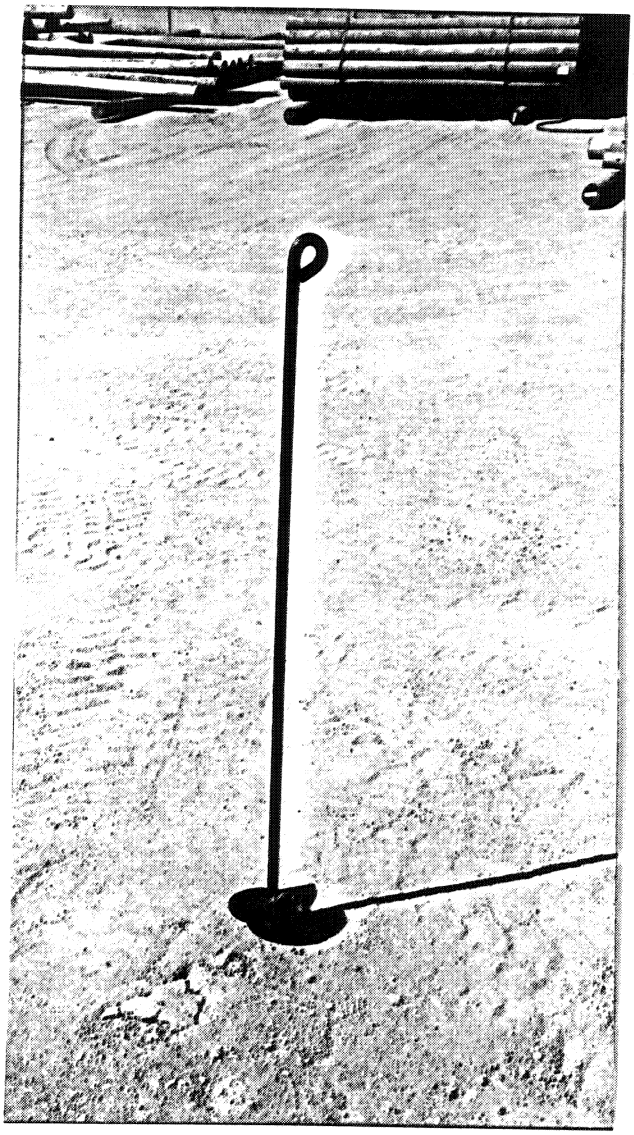
VINEYARD STAKES AND TRELLISES

MISCELLANEOUS



Steel end post with spade

$14.50 to **$16.50** each
$3.60 install



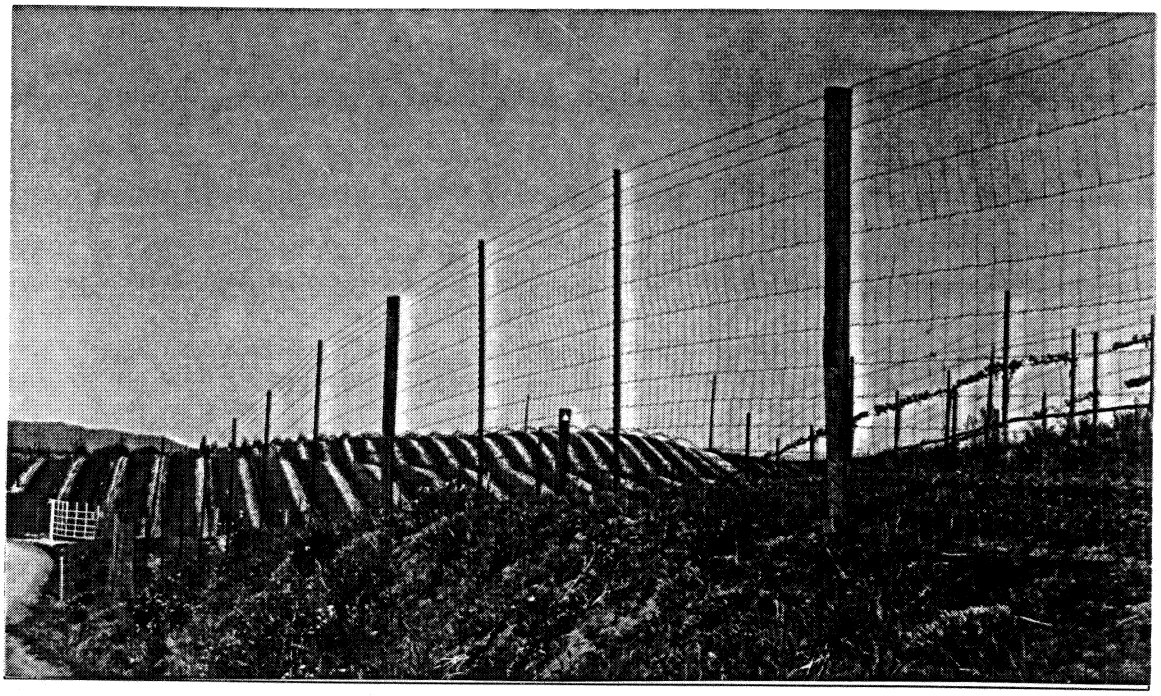
Screw-in earth anchor

4" x 30" : **$3.25**
6" x 36" : **$4.00**
$3.00 install

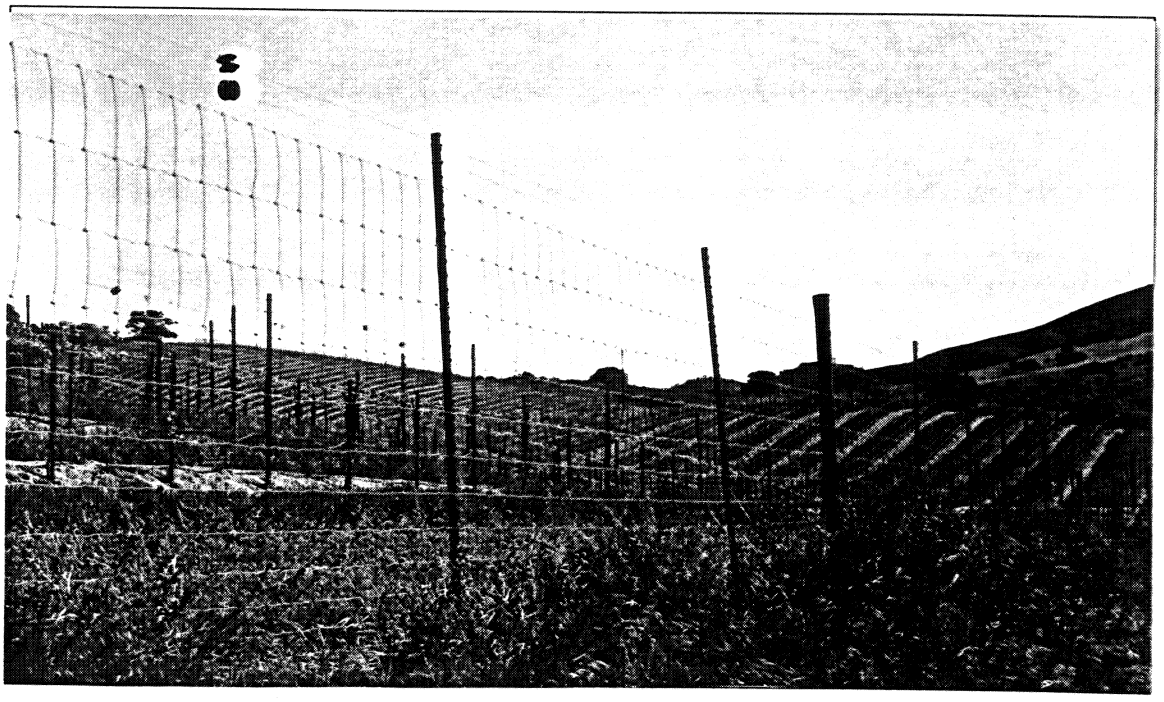
VINEYARD STAKES AND TRELLISES

MISCELLANEOUS

DEER FENCE



7' Deer fence made with 9' T-post and 9' wood stakes
6 ½' woven wire with 2 barbed wires on top and steel gates at drives
Cost: **$3.75** to **$5.00** per linear foot



VINEYARD STAKES AND TRELLISES

USEFUL INFORMATION

WIRE

10 Gauge	2,060 ft. Per 100 lbs. roll
11 Gauge	2,580 ft. Per 100 lbs. roll
12 Gauge	3,370 ft. Per 100 lbs. roll
13 Gauge	4,470 ft. Per 100 lbs. roll
14 Gauge	5,860 ft. Per 100 lbs. roll

PLANTING SPACING AND WIRE CHART

Planting Pattern Between Plants—Between Rows	One-Wire System No. of Wire Feet Required Per Acre	No. of Plants Required Per Acre
3' x 6'	7,260'	2,420
4' x 6'	7,260'	1,815
5' x 6'	7,260'	1,452
6' x 6'	7,260'	1,210
3' x 7'	6,222'	2,074
4' x 7'	6,222'	1,555
5' x 7'	6,222'	1,245
6' x 7'	6,222'	1,037
7' x 7'	6,222'	889
3' x 8'	5,445'	1,815
4' x 8'	5,445'	1,361
5' x 8'	5,445'	1,089
6' x 8'	5,445'	907
7' x 8'	5,445'	778
8' x 8'	5,445'	681
3' x 9'	4,850'	1,613
4' x 9'	4,850'	1,210
5' x 9'	4,850'	968
6' x 9'	4,850'	807
7' x 9'	4,850'	691
8' x 9'	4,850'	605
5' x 10'	4,355'	871
6' x 10'	4,356'	726
7' x 10'	4,354'	622
8' x 10'	4,352'	544
5' x 11'	3,960'	792
6' x 11'	3,960'	660
7' x 11'	3,962'	566
8' x 11'	3,960'	495
5' x 12'	3,630'	726
5½' x 12'	3,630'	660
6' x 12'	3,630'	605
7' x 12'	3,626'	518
8' x 12'	3,632'	454

AH 534.78: STEEL BUILDINGS

The *all steel* building serves a variety of functions for the farmer/rancher with its most common use being either storage space for farm machinery or storage of feeds and grains. The typical building as described in this section reflects the cost of a basic building.

In addition, there are instances where the building cost is modified for wall height, partitions, and extra electrical circuits within the structure.

BASIC BUILDING COST

Square-foot costs of basic buildings include the following components:

1. Foundation as required for normal soil conditions.
2. Concrete slab floor, 4 inches to 6 inches thick with wire mesh.
3. A steel building made up of these components:

    - Steel frame or bents, 20, 25, or 30 feet on center.
    - Steel roof purlin, 4 1/2 to 5 1/2 feet on center.
    - Steel wall grits 6 to 7 feet on center.
    - Twenty-six gauge galvanized steel on walls and roof.
    - Window area equal to 2 percent of floor area.
    - Minimal light fixtures—including wiring.
    - One rotary vent per bay.
    - Two walk-in doors.
    - Two overhead or sliding doors.
    - Fourteen-foot eave height.

Basic steel buildings are of two types: the low profile roof pitch (1" in 12") and the more conventional barn-like roof pitch (4" in 12"). The cost differential between the two is considered immaterial for appraisal purposes.

ADDITIVE COSTS

Additive costs are the in-place cost components not included in the basic square-foot cost but are those costs found as part of steel buildings. They are added to the basic building cost to arrive at a total building cost.

STEEL BUILDINGS

COST PER SQUARE FOOT

	Width											
Length	**20'**	**25'**	**30'**	**35'**	**40'**	**45'**	**50'**	**55'**	**60'**	**65'**	**70'**	**80'**
20'	19.15											
25'	18.93	18.55										
30'	18.55	17.95	17.26									
35'	17.95	17.26	16.33	15.80								
40'	17.42	16.33	16.18	15.36	14.93							
50'	16.18	15.59	15.20	14.88	14.23	13.58	13.31					
60'	15.59	15.53	14.88	14.23	13.63	13.31	13.04	12.66				
75'	15.20	14.88	14.28	13.63	13.42	13.09	12.66	12.28				
80'	14.88	14.28	13.63	13.31	13.09	12.66	12.28	12.01	11.69	11.36	11.10	10.92
90'	14.28	13.62	13.31	13.09	12.66	12.28	12.01	11.69	11.36	11.10	10.92	10.43
100'	13.63	13.36	13.09	12.66	12.28	12.01	11.69	11.36	11.03	10.92	10.43	10.17
135'		13.09	12.66	12.28	12.01	11.69	11.36	11.10	10.92	10.43	10.28	10.07
150'			12.28	12.01	11.69	11.36	11.10	10.92	10.43	10.17	10.07	9.84
175'				11.69	11.36	11.10	10.92	10.43	10.17	10.07	9.84	9.74
200'					11.10	10.92	10.43	10.17	10.07	9.84	9.74	9.58
225'						10.43	10.28	10.07	9.84	9.74	9.58	9.53
250'							10.07	9.84	9.74	9.58	9.53	9.53

ALTERNATE COSTS

Dirt Floor: Due to increased size of footings/foundation, no adjustment for dirt floor.

Wall Height: Add or subtract 3 percent per square foot from basic cost for each foot of variation above or below the basic 14-foot eave height.

Missing Wall Cover: Deduct **$1.80** for each square foot of missing wall area.

Electrical Power: Deduct **$1.50 - $2.00** per square foot for lack of power.

The above costs are for 26 gauge steel cover.

STEEL BUILDINGS

ADDITIVE COSTS

The cost of additives, such as doors and windows, that replace a portion of the exterior skin of the building, reflects the net added cost of the component in-place. The cost of the skin that is replaced has been deducted from the total cost of the additive components. No further deduction is necessary.

OVERHEAD DOORS WITH CHAIN HOIST OPENERS

	Height				
Width	**8'**	**10'**	**12'**	**14'**	**16'**
8'	$590	$620	$720	$930	
10'	640	680	770	890	$990
12'	680	800	900	1,070	1,150
14'	930	1,000	1,060	1,130	1,240
16'	1,030	1,110	1,180	1,270	1,660
18'	1,260	1,380	1,490	1,600	

WALK-IN DOORS

Flush 3' x 7'	$440
Half Glass	$500

ROTARY VENTS

20"	$200

RIDGE VENTS

9" x 10'	$375
12" x 10'	$425

GUTTERS AND DOWNSPOUTS

Per lineal foot	$5

SKYLIGHTS

3' x 10'	$60 - $90

WINDOWS

3' x 3'	$130
3' x 6'	160
4' x 6'	210
4' x 8'	260

STEEL BUILDINGS

ADDITIVE COSTS

HEATING

Overhead Suspended Unit	Cost Per Unit
75,000 BTU	$900
100,000 BTU	1,100
200,000 BTU	1,500
300,000 BTU	2,000

RESTROOMS

	Total Cost
Cost includes 2 fixtures, electrical service, and all partitions. Add for septic tank.	$3,500 - $4,500

OFFICE AREAS

	Square Foot
Cost includes partitioning, interior finish, trim, and doors	$25 - $35

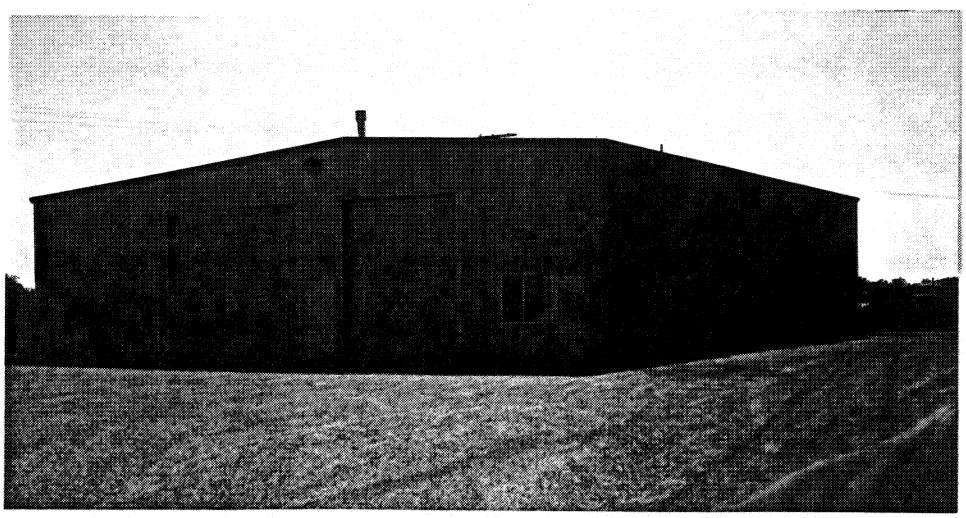
PARTITIONS

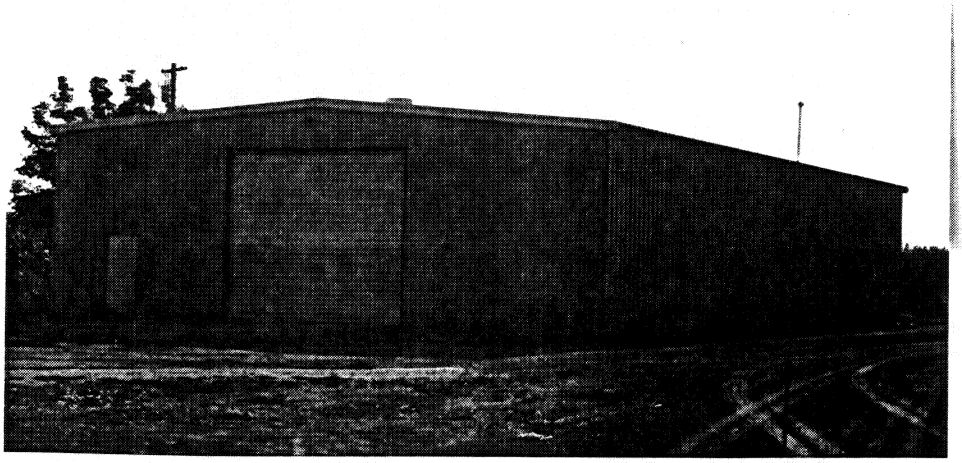
	Per Surface Foot
Gypsum on wood frame	$3.50
Plaster on wood frame	$5.00
Paneling (average quality)	$4.00 - $5.00

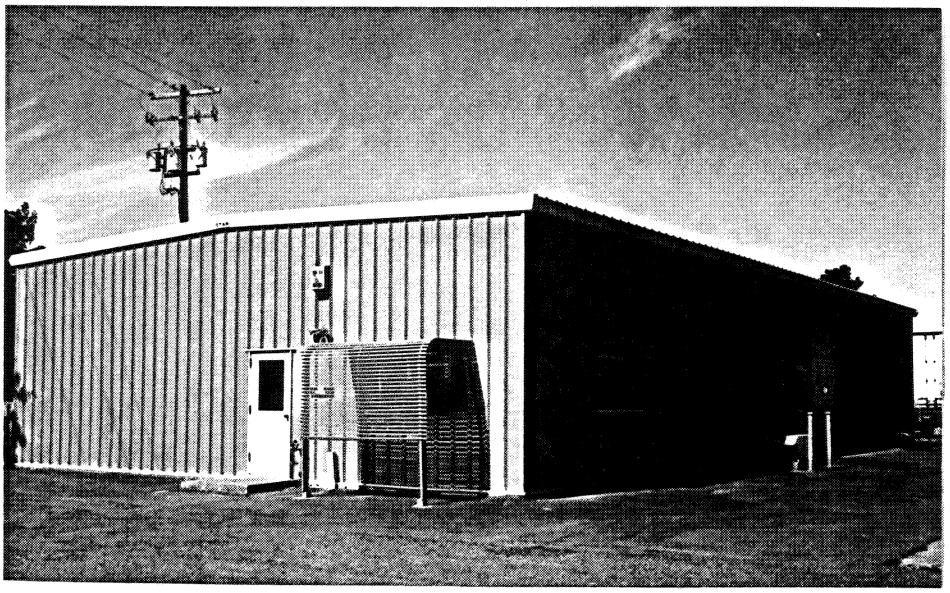
INSULATION

	Square Foot
R-11	$.55 - $.60
R-6	$.45 - $.50

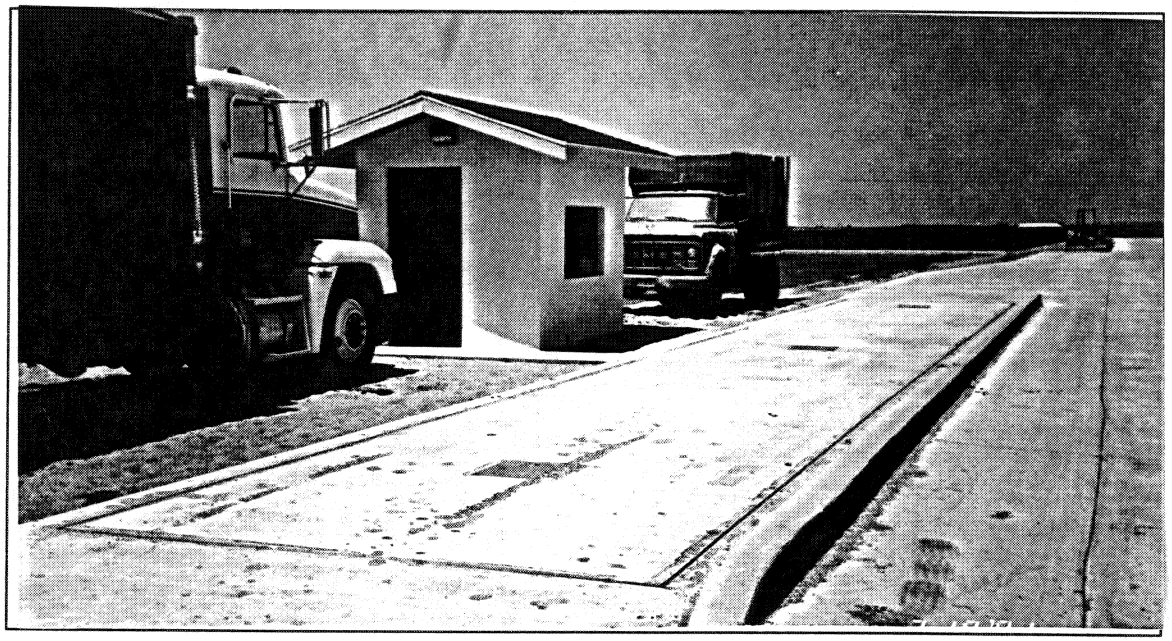
STEEL BUILDINGS







AH 534.79: MISCELLANEOUS COSTS



PIT TYPE MOTOR TRUCK SCALES WITH CONCRETE DECK

Scales			Scale Pit		
Tons Capacity	Platform Size	Total Cost	Size	Standard Cost	Add for: 12' Width
20	25' x 10'	$ 9,450	25' x 10'	$ 9,800	900
30	25' x 10'	10,400	40' x 10'	13,100	1,000
50	40' x 10'	16,000	50' x 10'	14,500	1,100
50	50' x 10'	16,900	60' x 10'	15,400	1,300
60	60' x 10'	18,500	70' x 10'	16,000	1,500
60	70' x 10'	21,600	80' x 10'	17,100	2,100
60	80' x 10'	24,300	90' x 10'	18,750	
80	80' x 10'	29,700	90' x 10'	18,750	
100	90' x 10'	33,000	100' x 10'	20,500	

Pitless above-ground scales, deduct 25% from above prices

ADD FOR WEIGHT RECORDING EQUIPMENT

Electronic indicator	$1,000
Ticket printer	$1,000

EXAMPLE OF MOTOR TRUCK SCALE COST

Scales:	80 ton capacity, 80' x 10' platform	$29,700
Scale Pit:	90' x 10' size, standard	18,750
	Electric weight recording equipment and printer	2,000
	Total	$50,450

MISCELLANEOUS COSTS

ELEVATED HOPPER TANK – Steel Support Legs, Stiffened Side Walls, Ladder, Roof Access Door, includes Concrete Base

Size	Cost
80 Tons	$ 9,000
100 Tons	11,500
130 Tons	13,500
160 Tons	15,400
200 Tons	18,500
235 Tons	20,500
300 Tons	26,000
350 Tons	33,500
400 Tons	36,000

HORIZONTAL OR FLAT STORAGE

Cwt	Cost per Cwt
28,000	$2.94
42,000	2.80
56,000	2.66
85,000	2.54
110,000	2.43
140,000	2.36
200,000	2.29
400,000	2.00
600,000	1.93

MISCELLANEOUS COSTS

ABOVE-GROUND FUEL TANKS & CONTAINMENT SYSTEMS

PREFABRICATED CONCRETE FUEL CONTAINMENT TUBS

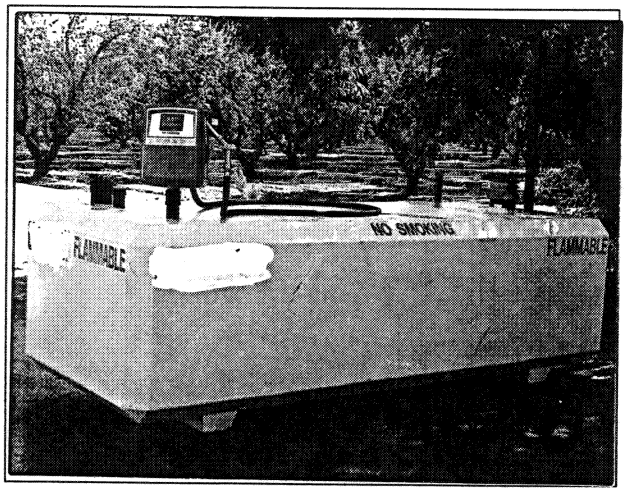
400 gallon capacity containment	$750
500 gallon capacity containment	$950
1,000 gallon capacity containment	$1,300

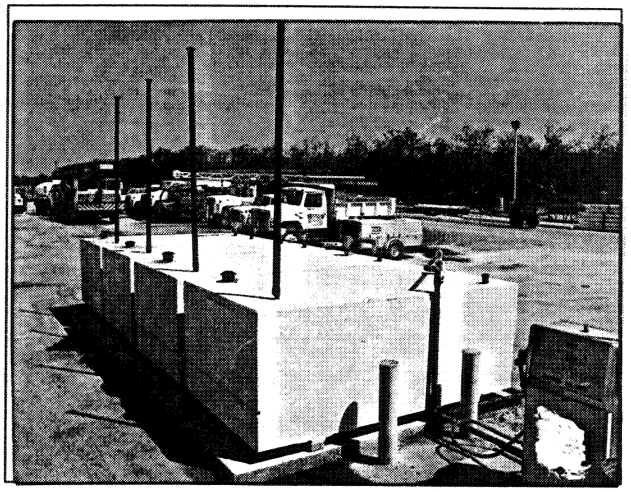
CONTAINMENT WITH TANK AND ELECTRIC PUMPS

500 gallon – diesel	$3,600
1,000 gallon – diesel	$4,800
500 gallon – gasoline	$4,300
1,000 gallon – gasoline	$5,600

ABOVE-GROUND FUEL TANKS (Steel Tanks with Thick Outer Shell of Concrete)

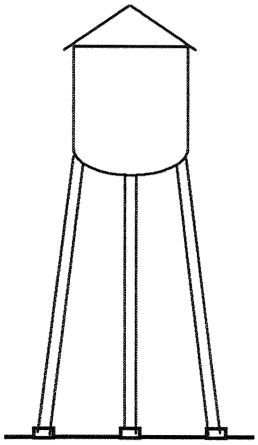
Gallons	Cost
500, with electric pump	$4,200 - $4,700
1,000, with electric pump	$7,300
2,000, with electric pump	$10,900
Double unit—(1) 1,000 gallon, (1) 500 gallon with 2 electric pumps	$8,800 - $9,100





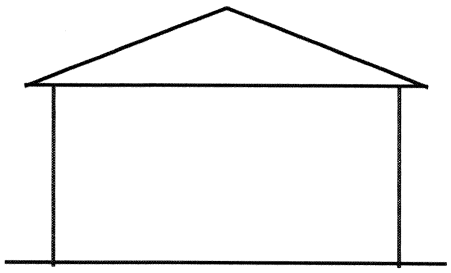
MISCELLANEOUS COSTS

ELEVATED STEEL WATER STORAGE TANKS



Gallon Capacity	Total Cost of 75' Tower and Tank	Total Cost of 100' Tower and Tank
25,000	$170,000	$195,000
30,000	180,000	207,000
40,000	190,000	212,000
50,000	195,000	222,000
60,000	204,000	232,000
75,000	210,000	244,000
100,000	242,000	265,000
150,000	307,000	328,000
200,000	380,000	402,000
300,000	475,000	509,000
500,000	635,000	678,000
1,000,000	1,060,000	1,165,000

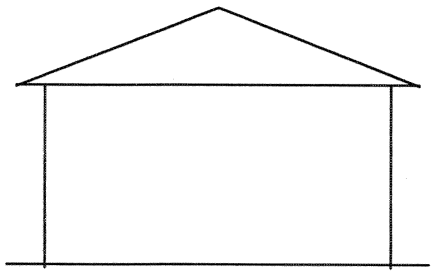
WELDED STEEL WATER STORAGE TANKS ON GROUND WITH FOUNDATION



Gallon Capacity	Total Cost of Tank on Ground
25,000	$33,000
30,000	37,000
40,000	41,000
50,000	49,500
60,000	54,500
75,000	65,000
100,000	79,500
150,000	92,500
200,000	105,000
300,000	133,000
500,000	195,500
1,000,000	288,000

MISCELLANEOUS COSTS

BOLTED STEEL WATER TANKS



Gallon Capacity	Total Cost of Tank on Ground
10,000	$11,000
20,000	16,000
30,000	20,000
50,000	26,000
75,000	31,000
100,000	33,000
125,000	40,000
150,000	48,000
200,000	58,000

Price varies due to gauge, height, diameter, and delivery costs.
Price typically includes crushed rock base or concrete on longer tanks.

POLYETHYLENE OR FIBERGLASS TANKS (Used for Ag Chemicals or Liquid Fertilizers)

Capacity (Gallons)	Cost
1,000	$ 900
2,000	1,675
3,000	2,575
4,000	3,260
5,000	4,100
6,000	4,760
8,000	6,100
10,000	7,400

Add **$2.50** per square foot for concrete base

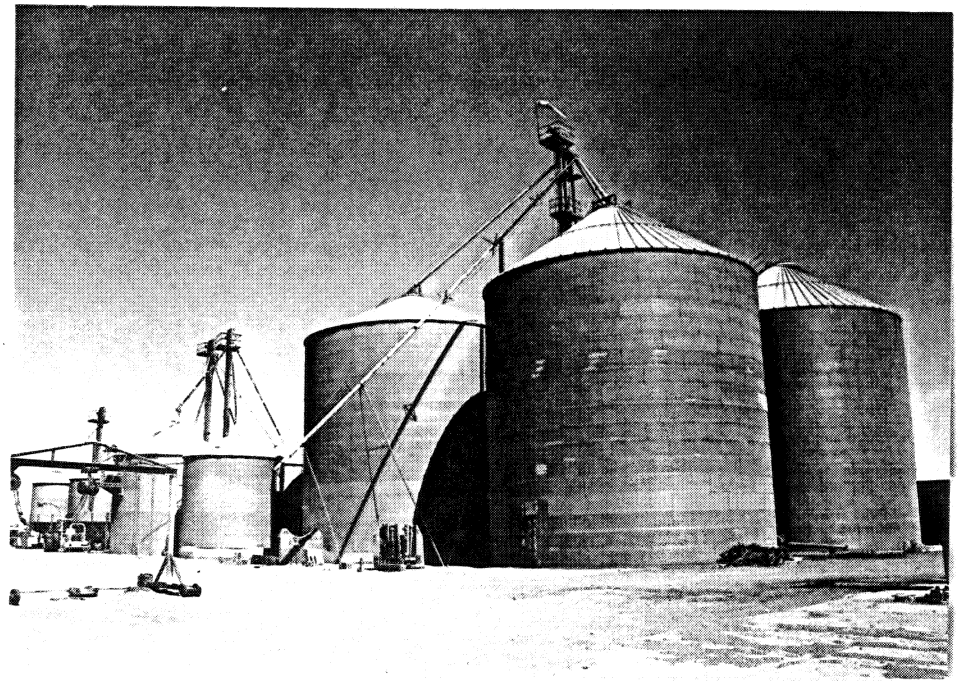
Polyethylene water only tanks, deduct 20% from above prices.

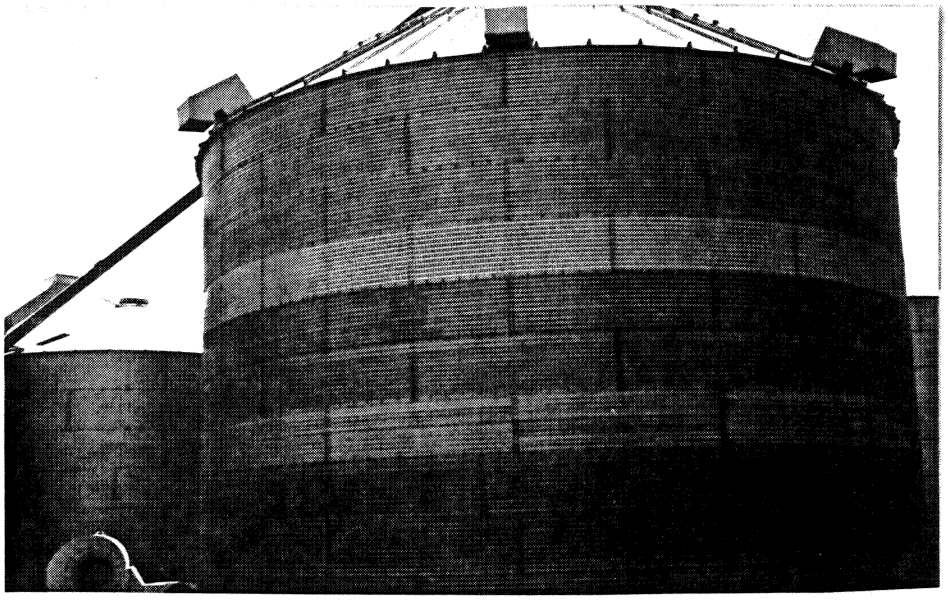
MISCELLANEOUS COSTS

STEEL GRAIN BINS

Sacramento and Northern California

Steel grain bins are used for storage and drying of small grains. The typical storage bin has metal walls and roof, a concrete floor and foundation. The drying bin is of similar construction with a dryer floor, unloading auger, and leveler. Dryer fan, heater unit, and motor are also considered part of the drying bin.





MISCELLANEOUS COSTS

STEEL GRAIN BINS

Sacramento and Northern California

GRAIN DRYING BINS

	Eave Heights											
Diameter	**8'**	**10'**	**13'**	**16'**	**18'**	**21'**	**24'**	**32'**	**40'**	**48'**	**58'**	**64'**
14'	11,567	11,781										
18'	13,056	13,694	14,010	14,326	15,071	15,387	16,978	21,012	23,878	26,214		
21'		15,387	15,922	16,346	16,978	17,723	19,635	24,200	26,959	30,457		
24'		17,621	18,044	18,676	19,370	20,375	22,710	27,856	30,886	35,343	39,581	43,192
27'		21,119	21,650	22,501	23,241	24,837	27,382	33,956	36,083	42,345	45,212	53,060
30'		23,776	24,200	25,046	26,107	27,591	30,141	37,143	41,172	46,905	55,182	60,486
36'			32,043	33,160	34,700	36,292	59,665	47,119	53,489	60,914	71,420	77,999
42'				40,963	41,494	43,722	51,367	58,991	68,876	76,515	89,673	96,150
48'				52,530	55,712	59,007	63,408	72,165	75,347	90,734	105,060	114,612

Includes cost of foundation, perforated floor, unloading auger, aeration unit, fan, dryer, and stirring devices.

GRAIN STORAGE BINS

	Eave Heights											
Diameter	**8'**	**10'**	**13'**	**16'**	**18'**	**21'**	**24'**	**32'**	**40'**	**48'**	**58'**	**64'**
14'	5,891	6,156										
18'	6,686	7,375	7,803	8,119	8,231	9,129	10,827	14,117	16,718	19,314		
21'		8,384	8,915	9,231	9,552	10,506	12,628	16,448	19,105	22,501		
24'		9,761	10,292	10,613	11,674	12,204	14,963	18,783	22,287	26,000	31,039	34,491
27'		11,674	12,204	12,735	13,796	15,494	18,304	23,878	26,530	32,161	38,735	42,713
30'		13,265	13,796	14,326	15,387	17,621	19,844	25,898	29,713	35,287	44,151	49,664
36'			18,039	19,212	20,273	22,501	25,791	32,895	38,418	46,163	57,089	63,674
42'				24,092	24,730	26,214	34,491	41,494	50,306	59,007	71,099	78,744
48'				33,323	36,078	39,265	44,574	51,469	58,895	68,978	83,834	92,856

Includes cost of bin foundation, door, ladder, and unloading auger.

ADD FOR: Roof Augers **$650 - $1,000** (depends on length—13' to 24')
Fan **$1,700** (5 H.P.) to **$3,100** (25 H.P.)

PERFORATED FLOORS

14'	18'	21'	24'	27'	30'	36'	42'	48'
$1,150	$1,700	$2,100	$2,700	$3,300	$4,100	$5,700	$7,400	$9,000

MISCELLANEOUS COSTS

2-INCH REDWOOD WATER STORAGE TANKS

Gallons	Diameter	Height	Cost
500	5'	4'	$2,300
1,000	6'	6'	2,700
1,500	7'	6'	3,400
2,000	8'	6'	4,000
3,000	10'	6'	5,500
4,000	10'	8'	6,550
5,000	11'	8'	7,500
6,000	12'	8'	8,600
7,000	11'	10'	9,000
8,000	12'	10'	9,500
9,000	13'	10'	10,500
10,000	14'	10'	11,700
12,000	15'	10'	12,700
15,000	14'	14'	14,700

Above costs include chime joists, covers, foundation, and all labor, set up, and transportation charges.

ADD FOR:	Ladders	**$15** per lineal foot
	Water level registers	**$10** per lineal foot of tank height
	Cone covers	**$400 - $1,000** per tank

MISCELLANEOUS COSTS

3-INCH REDWOOD WATER STORAGE TANKS

Gallons	Diameter	Height	Cost
10,000	14'	10'	$17,200
12,000	14'	12'	20,300
15,000	16'	12'	21,700
20,000	18'	12'	28,000
25,000	17'	16'	30,600
30,000	20'	14'	35,500
40,000	23'	14'	44,500
50,000	24'	16'	49,800
60,000	26'	16'	55,900
70,000	28'	16'	59,600
75,000	29'	16'	67,500
80,000	30'	16'	72,800
90,000	30'	18'	76,500
100,000	32'	18'	81,900
150,000	37'	20'	112,700
200,000	43'	20'	136,600

Above costs include typical foundation, chime joists, tank cover, and all labor, set up, and transportation charges.

CYLINDRICAL 3-INCH REDWOOD WINE TANKS

Gallons Capacity	Base Price
1,000	$4,080
1,500	5,440
2,000	6,240
2,500	7,540
3,000	8,780
4,000	9,390
5,000	11,618
7,500	14,340
10,000	15,820
15,000	21,870
20,000	26,750
25,000	29,420
30,000	33,170

Base price includes 4" x 6" chime joists, 1/2' galvanized hoops, recessed head cover, side door with galvanized T-bolt.

MISCELLANEOUS COSTS

STAINLESS STEEL WINE TANKS

Gallons Capacity	Cost
1,000	$5,350
2,000	7,500
3,000	8,600
4,000	9,600
5,000	10,700
10,000	12,800
20,000	20,800
50,000	37,500
100,000	63,200
200,000	114,900

Cost includes all valves, temperature controls, vents, and cooling jackets for tanks with a capacity of 20,000 gallons or less. The cost on tanks of 50,000 gallons or more excludes cooling jackets.

CYLINDRICAL 2 INCH OAK TANKS

Gallons Capacity	Base Price
500	$1,930
750	2,800
1,000	3,600
1,250	4,430
1,500	5,150
2,000	7,200
2,500	8,300
3,000	9,575
4,000	12,800
5,000	15,400
6,000	18,500

Base price includes 4" x 6" chime joists, galvanized hoops, head supports with stainless steel head bolts, side door with stainless T-bolt, installation in Sonoma County. Foundations not included.

MISCELLANEOUS COSTS

PREFABRICATED METAL SHADES

SPECIFICATIONS

Foundation	Metal base plate with tie downs
Floor	Dirt
Wall/Roof Frame	2 3/8" galvanized structural tubing (4' on center) 7' to 9' eaves
Roofing	29-gauge steel with baked on enamel (extends 6" to 12" below eaves)
Exterior Wall Covering	None

COMMON SIZES

12' x 21'	$1,000	20' x 21'	$1,730
12' x 26'	1,210	20' x 26'	2,120
12' x 31'	1,590	20' x 31'	2,590
12' x 36'	1,850	20' x 36'	3,120
12' x 41'	2,120	20' x 41'	3,450

RV SHADES

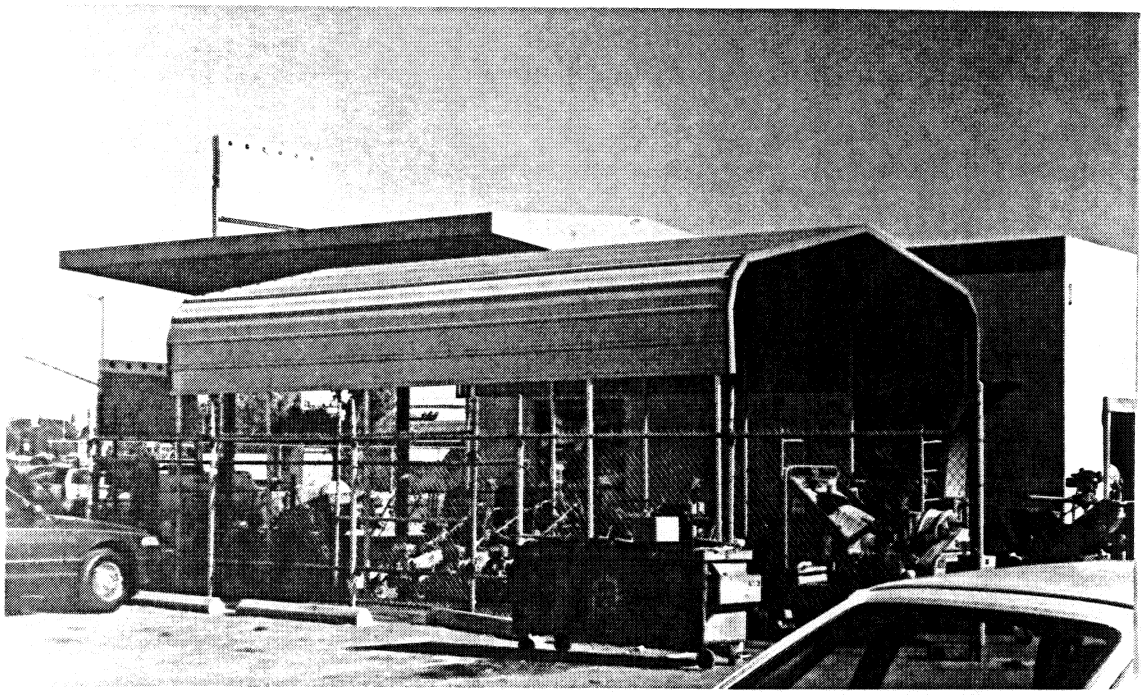
14' x 30' x 12'	$3,100
14' x 40' x 12'	4,100

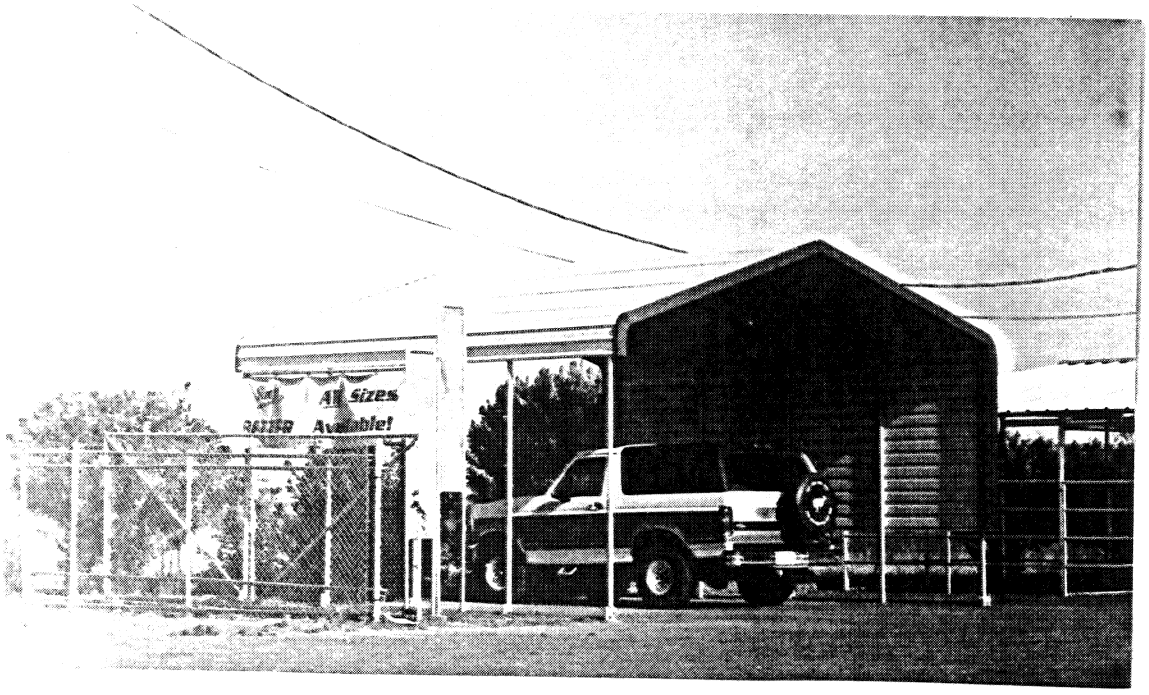
ADDITIVES

- Add 6 percent to above prices for 26-gauge steel roofing
- 29-gauge metal wall covering—**$1.00** per square foot of wall (standard roofing extends 6" to 12" below eaves)
- Back enclosure kit:
  12-foot wide — **$325**
  20-foot wide — **$425**
- Front enclosure kit with opening for roll-up door:
  12-foot wide — **$300**
  20-foot wide — **$350**
- Light duty roll-up doors
  8' x 6' — **$300**
  9' x 7' — **$350**
  10' x 8' — **$400**
  10' x 10' — **$450**
- Walk-thru door 32" x 72" —**$200 to $250**
- Add 3 percent for each additional foot of wall height above 8 feet
- Concrete floor—**$2.75 to $3.00** per square foot
- Windows 30" x 30" — **$125**

MISCELLANEOUS COSTS

PREFABRICATED METAL SHADES





AH 534.80: WIND MACHINES

NEW

New machines will average a physical life of 30 years. Typical usage will average 100 - 150 hours per year. Each wind machine will service approximately 10 acres.

WIND MACHINES

Model	Cost
G.P. 359 Cummins Diesel	$20,600
130 H-P Ford V-10 L.P.G.	$18,500
130 H-P Ford 460 L.P.G.	$16,500
115 H-P John Deere 6068 Diesel	$20,400
100 H-P Electric	$14,900
75 H-P Electric	$14,300
Portable Low Crop 115 H-P John Deere	$20,000
Portable Low Crop V-10 Ford L.P.G.	$19,700

Tower height for above machines is 36 feet.

OPTIONS

Item	Cost
41 Foot Tower	$850
Auto Thermostat Control	$3,000
Variable Speed Rotation	$1,500
Contour Assembly	$3,800

Above prices include foundation and installation.

WIND MACHINES

USED

USED ELECTRIC MACHINES

H-P	Model	Cost
12 1/2*	Frostmaster	$1,500
12 1/2*	Tropic Breeze	$1,500
25*	Frostmaster (Wood Fan)	$2,500
25*	Frostmaster (Metal Fan)	$2,500
25*	Tropic Breeze	$2,500
35*	Frostmaster	$2,700
40*	Tropic Breeze 900 RPM	$3,500
40*	Tropic Breeze Teeter Hub Fan	$3,500
50*	Tropic Breeze Teeter Hub Fan	$4,000
50*	Tropic Breeze 900 RPM	$4,000
60*	Tropic Breeze 900 RPM	$4,500
60*	Tropic Breeze Teeter Hub Fan	$4,500
75	Tropic Breeze 900 RPM	$4,500
75	Tropic Breeze Teeter Hub Fan	$4,500
100	Tropic Breeze 900 RPM	$5,250
100	Tropic Breeze Teeter Hub Fan	$5,250
125	Tropic Breeze 900 RPM	$6,700
125	Tropic Breeze Teeter Hub Fan	$7,000

The cost of used wind machines can vary widely depending upon the age and condition of the equipment.

USED GAS & *PROPANE MACHINES

H-P	Model	Cost
223-6	Gasoline 68 H-P	$4,000
240-6	Gasoline 68 H-P	$4,500
292-V-8	Gasoline 86 H-P	$5,500
332-V-8	Gasoline 86 H-P	$5,500
300-6	Gasoline 92 H-P	$6,000
391-V-8	Gasoline 100 H-P	$7,000
391-V-8	Gasoline 125 H-P	$7,500
460-V-8	Gasoline 125 H-P	$9,000

All the above machines can be converted to propane if desired. Cost will be **$600** additional for each motor.

DIESEL MACHINES (REBUILT ENGINES)

330 Ford *	6 Cylinder	Diesel - 81 H-P	$8,000
363 Ford *	6 Cylinder	Diesel - 100 H-P	$9,000
378 Cummins *	V-6	Diesel - 125 H-P	$9,000

The above prices include a 550 gallon above-ground fuel tank. Larger tanks are available on request at additional cost.

- Denotes: No longer made

WIND MACHINES

RECONDITIONED

RECONDITIONED ELECTRIC MACHINES

	Model	Cost
100 H-P	Phoenix	$5,700
100 H-P	Tropic Breeze PODS	$5,700
75 H-P	Tropic Breeze PODS	$5,000
75 H-P	Tropic Breeze D. Flange	$5,000
50 H-P	900 RPM	$5,000

RECONDITIONED GROUND POWERED TROPIC BREEZE

	Model	Cost
292 H-P	Ford, Propane	$7,000
332 H-P	Ford, Propane	$6,700
300 H-P	Ford, Propane	$8,000
391 H-P	Ford, Propane	$9,000
460 H-P	Ford, Propane	$10,000
In Line 6	John Deere, Diesel	$12,500
In Line 6	Cummins, Diesel	$12,000
V-6	Cummins, Diesel	$10,500

RECONDITIONED EOT

	Model	Cost
223 H-P	Ford, Gas	$4,000
292 H-P	Ford, Propane	$5,000
391 H-P	Ford, Propane	$8,000
460 H-P	Ford, Propane	$9,250

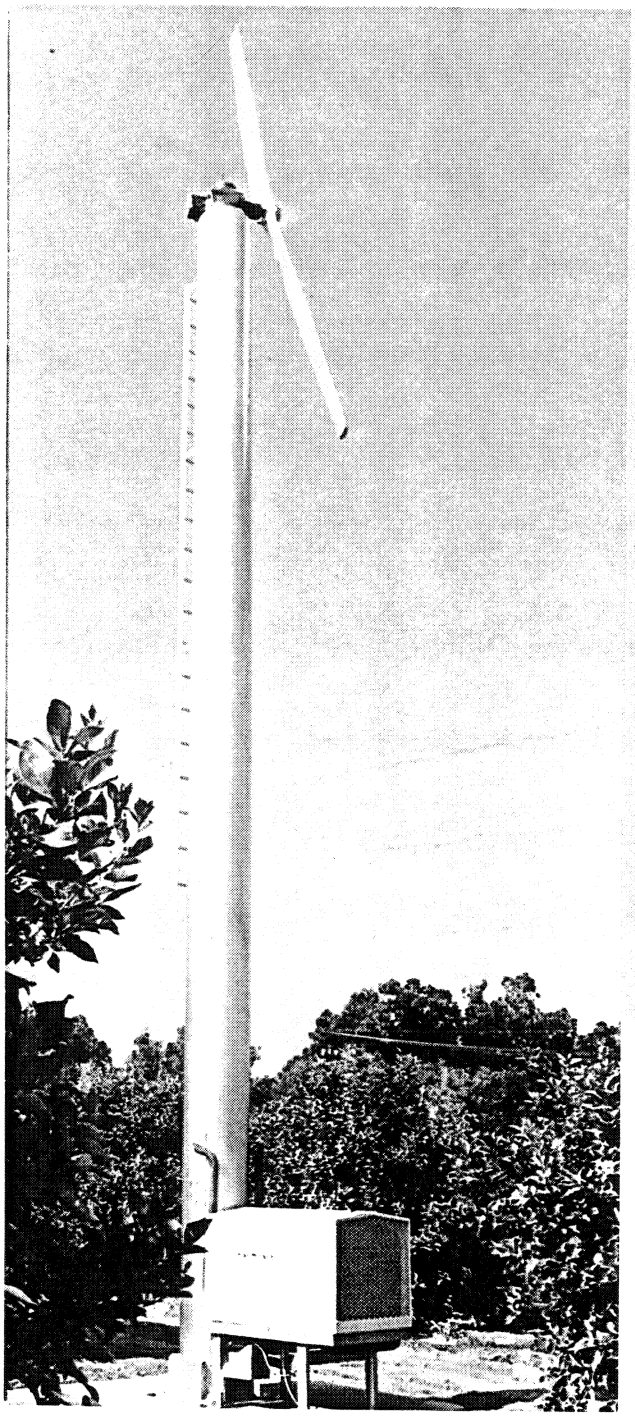
NOTE: All used costs listed above include foundation and installation.

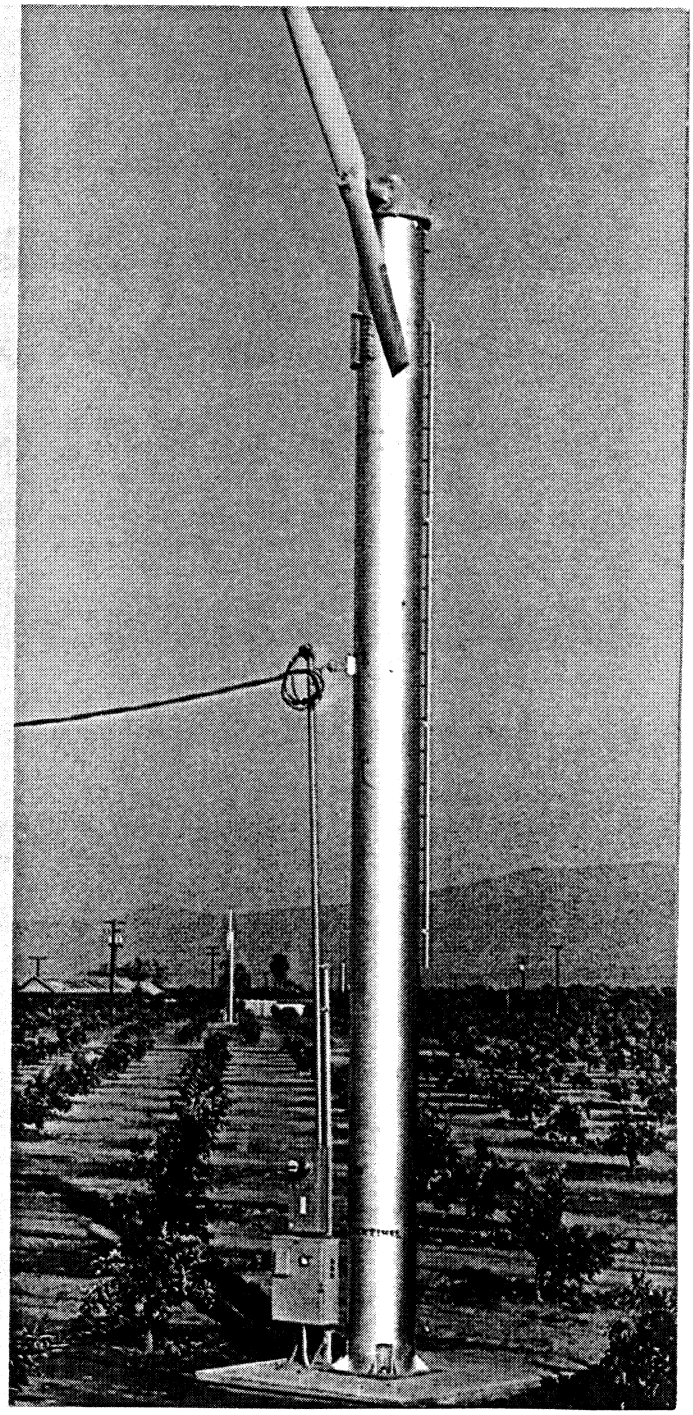
WIND MACHINES

ABBREVIATIONS

GP	Ground Power
RT	Rotating Tower
TT	Tall Tower
ST-ROT	Standard Rotation
SP-ROT	Special Rotation
LC	Low Crop
S	Single
D	Dual
EOT	Engine on Tower
SC	Special Contour

WIND MACHINES





AH 534.90: DEPRECIATION

AVERAGE LIFE TABLES

MISCELLANEOUS IMPROVEMENTS

Use Type of Improvement	Quality/Type	Type of Schedule	Average Life
Barns (General Farm)	Poor	R.	20
Barns (General Farm)	Fair	R.	30
Barns (General Farm)	Good	R.	40
Barns (General Farm)	Excellent	R.	60
Barns, Dairy	Poor	R.	20
Barns, Dairy	Average	R.	20
Barns, Dairy	Good	R.	25
Cold Storage Food Lockers	Poor	O.R.	30
Cold Storage Food Lockers	Average	O.R.	40
Cold Storage Food Lockers	Good	O.R.	50
Cold Storage Warehouses	Poor	O.R.	40
Cold Storage Warehouses	Average	O.R.	50
Cold Storage Warehouses	Good	O.R.	60
Cotton Gins		O.R.	30
Drive-In Theaters	Poor	O.R.	20
Drive-In Theaters	Good	O.R.	30
Drying Sheds (Fruits & Nuts) (Wood Frame)	Poor	R.	10
Drying Sheds (Fruits & Nuts) (Wood Frame)	Fair	R.	20
Drying Sheds (Fruits & Nuts) (Wood Frame)	Good	R.	30
Fences, Wood or Wire	Poor	R.	10
Fences, Wood or Wire	Average	R.	20
Fences, Wood or Wire	Good	R.	30
Fences, Chain Link, Residence-Farm	Light	R.	20
Fences, Chain Link, Industrial-Commercial	Good	R.	30

DEPRECIATION

AVERAGE LIFE TABLES

MISCELLANEOUS IMPROVEMENTS

Use Type of Improvement	Quality/Type	Type of Schedule	Average Life
Frost Protection Wind Machines		R.	30
Grain Elevators	Concrete and Metal	O.R.	50
Grain Storage Bins	Metal	O.R.	40
Grain Storage Bins	Concrete	O.R.	60
Greenhouses, Commercial	Poor Wood Frame	O.R.	20
Greenhouses, Commercial	Average	O.R.	30
Greenhouses, Commercial	Good	O.R.	40
Greenhouses, Conservatory (Back Yard)	Poor	R.	10
Greenhouses, Conservatory (Back Yard)	Good	R.	20
Hog and Sheep Sheds and Corrals	Poor	R.	10
Hog and Sheep Sheds and Corrals	Fair	R.	20
Hog and Sheep Sheds and Corrals	Good	R.	30
Lath Houses	Poor	R.	10
Lath Houses	Fair	R.	20
Lath Houses	Good	R.	30
Motor Truck Scales	Wood Under-structure	O.R.	30
Motor Truck Scales	Wood Under-structure	O.R.	40
Poultry Houses	Poor	R.	10
Poultry Houses	Medium	R.	20
Poultry Houses	Good	R.	30
Rice Drying and Storage Plants	Concrete and Metal	O.R.	50

DEPRECIATION

AVERAGE LIFE TABLES

MISCELLANEOUS IMPROVEMENTS

Use Type of Improvement	Quality/Type	Type of Schedule	Average Life
Service Stations	Poor Wood Frame	O.R.	20
Service Stations	Good Wood Frame, or Light Steel, or Masonry	O.R.	25
Service Stations	Good Wood Frame, or Light Steel, or Masonry	O.R.	30
Silos, Wood	Poor	R.	20
Silos, Wood	Good	R.	30
Silos, Masonry - Tile and Basalite		R.	40
Silos, Masonry - Concrete		R.	50
Steel Building, Quonset or Straight Wall Type (Steel Frame)	Light	O.R.	40
Steel Building, Quonset or Straight Wall Type (Steel Frame)	Medium	O.R.	50
Steel Building, Quonset or Straight Wall Type (Steel Frame)	Heavy	O.R.	60
Storage Sheds (Frame)	Poor	R.	20
Storage Sheds (Frame)	Fair	R.	30
Storage Sheds (Frame)	Good	R.	40
Swimming Pools	Poor	R.	10
Swimming Pools	Fair	R.	20
Swimming Pools	Good	R.	30
Water Tanks, Elevated	Wood Frame and Tank	O.R.	30
Water Tanks, Elevated	Wood Frame and Tank	O.R.	60

Poor = Poorest grade of materials; not contractor erected.
Fair = Average materials; builder erected.
Good = Good materials; good design; erected by competent builder.

DEPRECIATION

NORMAL PERCENT GOOD TABLES - RESIDENTIAL BUILDINGS

Age Years	20 Years Avg Life		25 Years Avg Life		30 Years Avg Life		40 Years Avg Life	
	Rem Life Years	Percent Good	Rem Life Years	Percent Good	Rem Life Years	Percent Good	Rem Life Years	Percent Good
0	20	100	25	100	30	100	40	100
1	19	94	24	95	29	96	39	98
2	18	88	23	90	28	93	38	96
3	17	81	22	86	27	89	37	94
4	16	75	21	81	26	86	36	92
5	15	69	20	77	25	82	35	90
6	14	63	19	72	24	79	34	87
7	13	59	18	68	23	75	33	84
8	12	57	17	63	22	71	32	82
9	11	55	16	60	21	67	31	80
10	11	53	16	58	20	64	30	77
11	10	50	15	56	19	60	29	74
12	9	48	14	54	19	59	28	72
13	8	46	13	53	18	57	27	70
14	7	44	12	51	17	56	27	67
15	7	42	11	49	16	54	26	65
16	6	40	11	48	15	53	25	62
17	5	38	10	46	14	52	24	60
18	5	36	9	44	13	50	23	59
19	4	33	8	43	13	49	22	58
20	4	31	7	41	12	47	21	56
21	3	29	7	39	11	46	21	55
22	3	27	6	37	11	44	20	54
23	3	25	6	35	10	43	19	53
24	3	23	5	34	9	42	18	52
25	2	21	5	32	9	40	17	51
26	2	19	4	30	8	39	17	50
27	2	16	4	29	7	37	16	49
28	2	14	4	27	7	36	15	48
29	2	12	3	25	6	34	14	47
30	1	10	3	24	6	33	14	46
31			3	22	5	31	13	45
32			3	20	5	30	12	44
33			2	18	5	29	12	43
34			2	17	4	17	11	42
35			2	15	4	26	11	41
36			2	13	4	24	10	40
38			1	10	3	21	9	38
40					2	19	7	35
42					2	16	6	33
46					1	10	5	29
50							4	25
55							3	20
60							2	14
64							1	10

DEPRECIATION

NORMAL PERCENT GOOD TABLES - RESIDENTIAL BUILDINGS

Age Years	45 Years Avg Life		50 Years Avg Life		55 Years Avg Life		60 Years Avg Life	
	Rem Life Years	Percent Good	Rem Life Years	Percent Good	Rem Life Years	Percent Good	Rem Life Years	Percent Good
0	45	100	50	100	55	100	60	100
2	43	97	48	97	53	98	58	98
4	41	93	46	94	51	96	56	96
6	39	89	44	91	49	94	54	94
8	37	85	42	88	47	91	52	92
10	35	81	40	85	45	88	50	90
12	33	77	38	82	43	85	48	88
14	32	73	36	78	41	82	46	86
16	30	69	35	74	40	79	45	83
18	28	65	33	70	38	76	43	80
20	26	60	31	67	36	73	41	77
22	24	58	29	63	34	69	39	74
24	23	56	28	60	32	65	37	71
26	22	54	26	58	31	62	35	68
28	20	52	24	56	29	60	34	65
30	18	50	23	54	27	58	32	63
32	17	48	21	53	26	56	30	60
34	15	47	20	51	24	55	29	58
36	14	45	18	49	23	53	27	57
38	12	43	17	47	21	51	26	55
40	11	41	16	45	20	50	24	54
42	10	39	14	44	19	48	23	52
44	9	37	13	42	17	46	21	51
46	8	35	12	40	16	45	20	49
48	7	33	11	38	15	43	19	47
50	6	31	10	37	14	41	18	46
52	5	29	9	35	12	40	16	44
54	5	28	8	33	11	38	15	43
56	4	26	7	31	10	36	14	41
58	4	24	6	30	9	35	13	40
60	3	22	5	28	8	33	12	38
62	3	20	4	26	7	31	11	37
64	3	18	4	24	6	30	10	35
66	2	16	3	22	5	28	9	33
68	2	14	3	21	5	27	8	32
70	2	12	3	19	4	25	7	30
72	1	10	2	17	4	23	6	29
76			2	14	3	20	5	26
80			1	10	2	17	4	23
84					1	10	2	16
96							1	10

DEPRECIATION

NORMAL PERCENT GOOD TABLES - OTHER THAN RESIDENTIAL BUILDINGS

Age Years	20 Years Avg Life		25 Years Avg Life		30 Years Avg Life		35 Years Avg Life	
	Rem Life Years	Percent Good	Rem Life Years	Percent Good	Rem Life Years	Percent Good	Rem Life Years	Percent Good
0	20	100	25	100	30	100	40	100
1	19	95	24	97	29	98	34	99
2	18	90	23	93	28	96	33	97
3	17	85	22	90	27	93	32	95
4	16	79	21	86	26	90	31	93
5	15	73	20	82	25	88	30	91
6	14	67	19	78	24	85	29	89
7	13	61	18	74	23	82	28	87
8	12	56	17	70	22	79	27	85
9	11	51	16	65	21	75	26	83
10	10	49	15	60	20	72	25	80
11	9	48	14	56	19	68	24	78
12	9	46	13	52	18	65	23	75
13	8	44	12	50	17	61	22	72
14	7	43	11	48	16	58	21	69
15	6	43	10	47	15	54	20	66
16	6	41	9	46	14	50	19	63
17	5	39	8	45	13	49	18	60
18	5	38	8	44	12	48	17	57
19	5	37	7	43	12	47	16	54
20	4	35	7	42	11	47	15	51
21	4	34	6	41	11	46	14	50
22	4	33	6	40	10	45	13	49
23	3	32	5	39	10	44	13	48
24	3	30	5	38	9	43	12	47
25	3	29	5	37	9	43	12	47
26	3	28	4	36	8	42	11	46
27	2	27	4	35	8	41	11	45
28	2	25	4	34	7	40	10	44
29	2	24	4	33	7	39	10	43
30	2	22	3	32	6	38	9	43
31	2	21	3	31	6	37	9	42
32	1	20	3	30	5	36	8	42
33			3	29	5	35	8	41
34			3	28	5	35	7	40
35			2	27	5	34	7	39
36			2	26	4	33	6	38
38			2	24	4	32	6	37
40			2	22	3	30	5	36
42			1	20	3	28	5	34
45					2	26	4	32
48					2	23	3	30
52					1	20	3	27
56							2	24
62							1	20

DEPRECIATION

NORMAL PERCENT GOOD TABLES - OTHER THAN RESIDENTIAL BUILDINGS

Age Years	40 Years Avg Life		45 Years Avg Life		50 Years Avg Life		55 Years Avg Life	
	Rem Life Years	Percent Good	Rem Life Years	Percent Good	Rem Life Years	Percent Good	Rem Life Years	Percent Good
0	40	100	45	100	50	100	55	100
2	38	98	43	99	48	99	53	99
4	36	96	41	97	46	98	51	98
6	34	93	39	95	44	97	49	97
8	32	90	37	93	42	95	47	96
10	30	86	35	90	40	93	45	95
12	28	82	33	87	38	91	43	94
14	26	78	31	84	36	88	41	92
16	24	73	29	81	34	85	39	90
18	22	68	27	77	32	82	37	88
20	20	63	25	73	30	80	35	86
22	18	58	23	69	28	77	33	83
24	17	53	21	65	26	73	31	80
26	15	50	20	60	24	69	29	77
28	14	48	18	55	23	65	27	74
30	13	47	17	50	21	61	26	71
32	11	45	15	49	20	57	24	67
34	10	44	14	48	18	53	22	63
36	9	43	13	47	17	50	21	59
38	8	42	12	46	16	48	19	55
40	8	40	11	44	14	47	18	52
42	7	39	10	43	13	46	17	50
44	6	38	9	42	12	45	16	49
46	6	36	8	41	11	44	15	48
48	5	35	7	40	10	43	14	47
50	5	34	7	38	10	42	13	45
52	4	32	6	37	9	41	12	44
54	4	31	6	36	8	40	11	43
56	3	30	5	35	8	39	10	42
58	3	29	5	34	7	38	9	41
60	3	27	4	32	7	37	9	40
62	2	26	4	31	6	36	8	39
64	2	25	4	30	6	35	8	38
66	2	24	3	29	5	34	7	37
68	2	22	3	28	5	33	7	36
70	2	21	3	27	4	32	6	36
72	1	20	3	25	4	31	6	35
74			2	24	5	30	5	34
76			2	23	3	28	5	32
82			1	20	3	26	4	30
84					2	24	4	29
88					2	22	3	27
92					1	20	2	25
96							2	23
102							1	20

DEPRECIATION

NORMAL PERCENT GOOD TABLES - OTHER THAN RESIDENTIAL BUILDINGS

	60 Years Average Life		70 Years Average Life	
Age Years	Remaining Life Years	Percent Good	Remaining Life Years	Percent Good
0	60	100	70	100
2	58	99	68	99
4	56	99	66	99
6	54	98	64	99
8	52	97	62	98
10	50	96	60	98
12	48	95	58	97
14	46	94	56	96
16	44	93	54	96
18	42	92	52	95
20	40	89	50	94
22	38	87	48	93
24	36	85	46	92
26	34	83	45	91
28	32	81	42	89
30	30	78	40	87
32	29	75	39	85
34	27	72	37	83
36	25	69	35	81
38	24	66	33	79
40	22	63	31	76
42	21	60	30	73
44	20	56	29	70
46	18	52	27	67
48	17	49	26	64
50	16	48	25	61
52	15	47	23	58
54	14	46	22	56
56	13	46	21	54
58	12	45	20	52
60	11	44	19	50
64	10	42	17	48
68	9	40	15	46
72	8	38	13	44
76	7	36	12	43
80	6	35	11	41
86	5	32	9	39
92	4	29	8	36
100	3	25	6	33
108	2	22	4	29
112	1	20	3	27
122			2	24
130			1	20