Concord Crop Estimation Guide

Collecting a little bit of information from the vineyard during the growing season can greatly improve your prediction of final yields with better accuracy than the eyeball method. Know your Bloom Date, Space between Vines, & Space between Rows. Calculate how many vines equate to 1/100th of an acre, and know how many Days After Bloom (DAB) samples were collected.

Example:

- Row & Vine Spacing. If 9' between rows the table provides the 1/100th acre calculation for you which equals **48.4 feet.**
- How many vines are in 48.4 feet if vines are spaced 8 feet apart? 48.4/8 = 6.05 vines (round down to 6)
- Use Spatial Map to direct Sample locations to capture vineyard variation.
- Clean Pick Fruit from Calculated 1/100th Acre (In this example it equals 6 vines from 48.4/8). Clean pick fruit from 2 vines from high vigor zone, 2 vines from medium vigor, and 2 vines from low vigor.
- **Total Weight of Ibs of Fruit Collected.** Weigh each sample taken above, be sure to subtract the weight of the bucket or bin used from total weight sum weights from all 6 samples to get total weight.
- Consult Table on Back to Find Corresponding Crop Estimation.

Mechanical Crop Estimation

Cut a length of rope to guide your sampling lengths, lay it down along the row, clean pick with the harvester the length of the rope, weigh lbs of fruit collected. Walk behind afterwards to assess how many grapes are still on the vine/or that are on the ground.

Using the Chart:

Once you have the sample, the chart does the rest of the work for you. Follow the corresponding DAB down and the respective weight over and you have the estimated tons/acre at harvest. For example, let's say it's July 25th or 40 DAB (bloom on June 15th) and the fruit weighs 100 pounds. Crop estimated 8.3 ton/acre potential crop.

Time of Station Time of Station Arranson Arranso				-	Dr. Tern	/ Bates	Dr. Terry Bates: Crop Estimation and Thinning Table: 7/16/2003	Estima	tion an	nd Thin	ning T	able: 7/	16/200	3		
20 25 30 35 40 45 50 55 60 65 70 75 80 90 25 20 13 14 13 11 10 08 07 05 05 11<			20DAB		250	AB		Time	e of Sea	son 40DAB	SODAB		Veraisor	-		larvest
% of Final Borry Weight 20 25 30 35 40 45 56 65 70 75 80 90 75 60 65 70 75 80 65 70 75 80 90 75 60 65 70 75 80 65 70 75 80 90 75 61 57 73 23 33				l	2003	2			!		2000		V CI GIOCI			101 1021
20 25 30 35 40 45 50 55 60 65 70 75 80 90 75 6 5 3 2 2 1	Pounds of Fruit Removed in 1/100th of							% of Fin	al Berry	Weight						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	an Acre	20	25	30	35	40	45	50	55	60	65		75		60	100
33 2.9 2.5 2.2 1.8 1.7 1.5 1.4 1.3 1.3 1.1 50 4.3 3.8 3.3 3.0 2.7 2.5 2.3 2.1 2.0 1.9 1.7 50 8.6 5.0 4.5 5.5 5.0 4.6 4.3 3.3 3.1 2.8 3.3 3.3 3.5 5.6 5.0 4.6 4.3 3.3<	10	2.5	2.0	1.7	1.4	1.3	1.1	1.0	0.9	0.8	0.8		0.7		9.0	0.5
50 4.3 38 33 30 2.7 2.5 2.3 3.1 2.9 1.7 6.7 5.0 4.4 4.0 3.6 3.3 3.1 2.9 2.7 2.5 2.2 2.8 11.7 10.0 8.8 7.8 7.0 6.4 5.8 5.4 5.0 4.7 4.4 3.9 11.7 10.0 8.8 7.3 6.7 6.5 5.0 4.4 4.0 3.8 3.3 3.3 11.7 10.0 8.9 7.3 6.7 6.2 5.7 5.3 5.0 4.4 15.0 17.3 10.0 9.1 8.2 7.3 6.7 6.3 5.0 16.7 14.3 10.0 9.2 8.5 7.3 5.1 7.3 20.0 17.5 15.6 14.2 13.6 10.7 5.8 6.7 20.1 17.1 10.7 10.3 8.1 10.7 10.7	20	5.0	4.0	3.3	2.9	2.5		2.0	1.8	1.7			1.3		1.1	1.0
6.7 5.7 5.0 4.4 4.0 3.6 3.3 3.1 2.9 2.7 2.5 2.2 2.2 0.0 8.6 7.5 6.7 6.0 4.5 4.3 3.6 3.3 3.1 2.8 11.7 10.0 8.9 7.0 6.4 5.8 5.4 5.0 4.4 3.3 13.3 11.4 10.0 8.9 8.0 7.3 6.7 6.2 5.7 5.3 5.0 4.4 15.0 12.2 11.1 10.0 9.0 8.2 7.5 6.9 6.4 6.0 5.6 6.7 15.0 17.1 15.0 13.3 12.0 10.9 10.0 9.3 8.7 8.1 7.2 21.7 18.6 16.3 14.4 13.0 11.8 10.0 9.3 8.8 7.8 23.3 20.0 17.5 13.3 12.3 11.5 11.1 10.7 10.9 9.6	30	7.5	6.0	5.0	4.3	3.8		3.0	2.7	2.5			2.0		1.7	1.5
8.3 7.1 6.3 5.6 5.0 4.5 5.3 3.6 3.3 3.1 2.8 100 8.6 7.5 6.7 6.0 5.5 5.0 4.6 4.3 4.0 3.8 3.3 13.1 10.0 8.8 7.5 6.7 6.7 6.4 4.4 3.8 3.3 13.1 10.0 8.8 8.0 5.6 6.5 5.0 4.6 5.0 5.6 5.0 15.7 13.8 12.2 11.1 10.0 9.1 8.3 7.7 7.1 6.7 6.3 5.6 6.7 16.7 15.0 13.3 12.2 11.0 10.0 9.1 8.1 7.2 17.7 15.0 13.3 12.2 11.1 10.0 9.2 8.5 7.9 7.3 8.1 7.2 23.3 24.3 21.4 18.6 16.7 15.0 12.5 11.1 10.7 10.0 9.4 8.3 7.8 23.3 24.3 21.3 18.6 16.7 15.	40	10.0	8.0	6.7	5.7	5.0		4.0	3.6	3.3			2.7			2.0
100 86 7.5 6.7 6.0 5.5 5.0 4.6 4.3 4.0 3.8 3.3 11.7 100 8.8 7.8 7.0 6.4 5.8 5.4 5.0 4.4 3.9 13.3 11.1 100 8.9 8.0 7.3 6.1 6.1 3.9 16.7 14.3 12.5 11.1 10.0 9.1 8.3 7.7 7.1 6.7 6.3 5.6 16.7 14.3 12.2 11.0 10.0 9.1 8.3 7.7 7.1 6.7 6.3 5.6 20.0 17.5 14.4 13.0 11.7 10.0 9.2 8.7 7.9 7.2 21.7 18.6 16.7 14.5 13.0 12.5 11.5 10.7 9.4 8.7 8.1 7.2 21.7 18.6 16.7 13.6 12.2 11.1 10.7 10.0 9.4 8.3 3.3	50	12.5	10.0	8.3	7.1	6.3	5.6	5.0	4.5	4.2			3.3			2.5
11.7 10.0 8.8 7.8 7.0 6.4 5.8 5.4 5.0 4.7 4.4 3.9 15.3 11.4 10.0 8.9 8.0 7.3 6.7 6.3 5.0 4.4 15.0 12.5 11.1 10.0 9.0 8.2 7.5 6.9 6.7 6.3 5.0 4.4 16.7 13.3 12.2 11.0 10.0 9.2 8.6 7.9 7.5 6.7 6.7 6.7 6.7 6.7 5.0 4.4 20.0 17.1 15.0 13.3 12.0 10.0 9.2 8.6 8.0 7.5 6.7 6.7 6.7 6.7 5.6 6.7	60	15.0	12.0	10.0	8.6	7.5	6.7	6.0	5.5	5.0			4.0		3.3	3.0
13.3 11.4 10.0 8.9 8.0 7.3 6.7 6.2 5.7 5.3 5.0 4.4 15.0 12.9 11.3 10.0 9.0 8.2 7.5 6.9 6.4 6.0 5.6 5.0 4.4 16.7 14.3 12.5 11.1 10.0 9.1 8.3 7.3 5.5 6.9 6.1 6.1 5.6 5.0 6.1 5.6 5.0 6.1 5.5 5.6	70	17.5	14.0	11.7	10.0	8.8	7.8	7.0	6.4	5.8			4.7			3.5
15.0 12.3 11.3 10.0 9.0 8.2 7.5 6.9 6.4 6.0 5.6 5.0 16.7 14.3 12.5 11.1 10.0 9.1 8.3 7.7 7.1 6.7 6.3 5.6 5.7 5.2 5.1 13.0 11.7 10.0 9.3 8.8 7.8 5.7 2 5.5 5.1 13.1 10.7 10.0 9.4 8.3 7.8 5.5 5.7 11.1 10.0 10.0 10.0 5.5 5.7 13.3 10.0 10.7	80	20.0	16.0	13.3	11.4	10.0	8.9	8.0	7.3	6.7			5.3			4.0
16.7 14.3 12.5 11.1 10.0 9.1 8.3 7.7 7.1 6.7 6.3 5.6 18.3 15.7 13.8 12.2 11.0 10.0 9.2 8.5 7.9 7.3 6.9 6.1 20.0 17.1 15.0 13.3 12.0 11.8 10.0 9.2 8.6 8.0 7.5 6.7 8.1 7.2 21.7 18.6 16.3 14.4 13.0 11.8 10.0 9.3 8.7 8.1 7.2 23.3 20.0 17.5 15.6 14.0 12.7 11.7 10.8 10.7 9.3 8.3 7.8 7.8 26.7 22.9 20.0 18.0 16.4 15.0 13.1 12.1 11.0 10.0 8.9 7.8 3.3 26.7 22.5 20.0 18.0 16.4 15.0 13.8 12.9 11.0 10.6 9.4 30.0 25.7 22.5 20.0 18.0 15.4 14.5 13.1 10.7 10.6	06	22.5	18.0	15.0	12.9	11.3	10.0	9.0	8.2	7.5			6.0			4.5
15.7 13.8 12.2 11.0 10.0 9.2 8.5 7.9 7.3 6.9 6.1 20.0 17.1 15.0 13.3 12.0 10.9 10.0 9.2 8.6 8.0 7.5 6.7 21.7 18.6 16.3 14.4 13.0 11.8 10.0 9.3 8.7 8.1 7.8 23.3 20.0 17.5 15.0 13.6 12.7 11.7 10.0 9.3 8.8 7.8 3.3 25.0 21.4 18.8 16.0 14.5 14.5 13.1 10.1 10.0 9.4 8.3 25.0 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.1 20.0 18.0 16.6 17.3 15.8 14.6 13.6 12.7 11.9 10.6 9.4 30.0 25.7 23.8 21.1 19.0 17.3 15.8 12.7 11.9 10.6 31.7 27.1 23.8 12.9 12.7 11.9 10.6 9.4 </th <th>100</th> <td>25.0</td> <td>20.0</td> <td>16.7</td> <td>14.3</td> <td>12.5</td> <td>11.1</td> <td>10.0</td> <td>9.1</td> <td>8.3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>5.0</td>	100	25.0	20.0	16.7	14.3	12.5	11.1	10.0	9.1	8.3						5.0
20.0 17.1 15.0 13.3 12.0 10.9 10.0 9.2 8.6 8.0 7.5 6.7 21.7 18.6 16.3 14.4 13.0 11.8 10.8 10.0 9.3 8.7 8.1 7.2 23.3 20.0 17.5 15.6 14.4 13.0 11.8 10.6 9.3 8.8 7.8 7.8 25.0 21.4 18.8 16.7 15.0 13.6 12.5 11.4 10.7 10.0 8.9 8.3 8.8 7.8 3.3 26.7 22.9 20.0 17.8 16.7 15.5 14.2 13.1 12.1 11.3 10.0 8.9 8.8 7.8 10.0	110	27.5	22.0	18.3	15.7	13.8	12.2	11.0	10.0	9.2						5.5
21.7 18.6 16.3 14.4 13.0 11.8 10.8 10.0 9.3 8.7 8.1 7.2 23.3 20.0 17.5 15.6 14.0 12.7 11.7 10.8 10.0 9.3 8.8 7.8 7.8 25.0 21.4 18.8 16.0 14.5 13.3 12.3 11.4 10.7 10.0 8.9 8.8 7.8 25.7 22.9 20.0 17.8 16.0 15.5 14.2 13.1 12.1 11.3 10.0 8.9 28.3 24.3 21.1 19.0 17.3 15.5 14.2 13.1 12.1 11.3 10.0 8.9 30.0 25.7 22.5 20.0 18.0 16.4 15.0 13.8 12.9 11.1 10.0 31.7 27.1 23.8 21.1 19.0 17.3 15.4 14.3 13.3 12.5 11.1 14.0 61 an acre Example: 14.6 13.6 12.7 11.4 10.6 94 10.6	120	30.0	24.0	20.0	17.1	15.0	13.3	12.0	10.9	10.0						6.0
23.3 20.0 17.5 15.6 14.0 12.7 11.7 10.8 10.0 9.3 8.8 7.8 25.0 21.4 18.8 16.7 15.0 13.6 12.5 11.5 10.7 10.0 9.4 8.3 26.7 22.9 20.0 17.8 16.0 14.5 13.3 12.3 11.4 10.7 10.0 8.9 48.4 28.3 24.3 21.3 18.0 17.0 15.5 14.2 13.1 12.1 11.3 10.0 8.9 48.4 30.0 25.7 22.5 20.0 18.0 17.3 15.8 14.6 13.6 11.3 10.0 31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.1 10.0 31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 11.1 10.0 33.3 28.6 25.0 22.2 20.0 18.2 16.7 15.4 14.3 12.5 11.1	130	32.5	26.0	21.7	18.6	16.3	14.4	13.0	11.8	10.8	-		8.7			6.5
25.0 21.4 18.8 16.7 15.0 13.6 12.5 11.5 10.7 10.0 9.4 8.3 26.7 22.9 20.0 17.8 16.0 14.5 13.3 12.3 11.4 10.7 10.0 8.9 8.9 28.3 24.3 21.3 18.9 17.0 15.5 14.2 13.1 12.1 11.3 10.0 8.9 28.3 24.3 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.3 10.0 31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.9 10.6 33.3 28.6 25.0 22.2 20.0 18.2 15.4 14.3 13.3 12.6 11.1 11.1 Ih of an acre Example: Ith of an acre 25.4 14.3 13.3 12.5 11.1 11.1 Ih of an acre Fan acre 15.4 14.3	140	35.0	28.0	23.3	20.0	17.5	15.6	14.0	12.7	11.7			9.3			7.0
25.7 22.9 20.0 17.8 16.0 14.5 13.3 12.3 11.4 10.7 10.0 8.9 28.3 24.3 21.3 18.9 17.0 15.5 14.2 13.1 12.1 11.3 10.0 8.9 31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.9 10.0 31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.9 10.0 31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.9 10.0 31.0 acree It of an acree It of an acree It of an acree 12.1 11.9 10.6 9.4 Agrower has 9 foot row spacing and clean picks 48.4 feet at 25 days after bloom. It he function 35% and 40% of final berry weight. According to the table, the crop estimate is between 35% and 40% of final berry weight. According to the table, the crop estimate is between 10.0 and 11.4 tons per acre. Inscreting between 10.0 and 11.4 tons per acre. It stable gives the relationship between time of s	150	37.5	30.0	25.0	21.4	18.8	16.7	15.0	13.6	12.5			10.0		8.3	7.5
28.3 24.3 21.3 18.9 17.0 15.5 14.2 13.1 12.1 11.3 10.6 9.4 30.0 25.7 22.5 20.0 18.0 16.4 15.0 13.8 12.9 12.0 11.3 10.0 31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.9 10.0 33.3 28.6 25.0 22.2 20.0 18.2 16.7 15.4 14.3 13.3 12.5 11.1 33.3 28.6 25.0 22.2 20.0 18.2 16.7 15.4 14.3 12.5 11.1 The fruit weights 80 pounds and the grower estimates that the berries are between 17.55 11.1 1	160	40.0	32.0	26.7	22.9	20.0	17.8	16.0	14.5	13.3			10.7			8.0
30.0 25.7 22.5 20.0 18.0 16.4 15.0 13.8 12.0 11.3 10.0 31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.9 10.0 31.1 31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.9 10.6 11.1 11	170	42.5	34.0	28.3	24.3	21.3	18.9	17.0	15.5	14.2			11.3			8.5
31.7 27.1 23.8 21.1 19.0 17.3 15.8 14.6 13.6 12.7 11.9 10.6 33.3 28.6 25.0 22.2 20.0 18.2 16.7 15.4 14.3 13.3 12.5 11.1 th of an acre A grower has 9 foot row spacing and clean picks 48.4 feet at 25 days after bloom. The fruit weighs 80 pounds and the grower estimates that the berries are between 35% and 40% of final berry weight. According to the table, the crop estimate is between 10.0 and 11.4 tons per acre. Disclaimer: This table gives the relationship between time of season and % final berry weight on an average year. Year to year variability in weather related berry growth adds error to this table. Information on current year berry growth can be obtained from the final berry weight on an average year. Year to year variability in weather related berry growth adds error to this table. Information on current year berry growth can be obtained from the final berry weight on this table. Information from their own individual growers start collecting berry weight information from their own individual vineyard blocks.	180	45.0	36.0	30.0	25.7	22.5	20.0	18.0	16.4	15.0			12.0		10.0	9.0
33.3 28.6 25.0 22.2 20.0 18.2 16.7 15.4 14.3 13.3 12.5 11.1 th of an acre Example: A grower has 9 foot row spacing and clean picks 48.4 feet at 25 days after bloom. The fruit weighs 80 pounds and the grower estimates that the berries are between 35% and 40% of final berry weight. According to the table, the crop estimate is between 10.0 and 11.4 tons per acre. Disclaimer: This table gives the relationship between time of season and % final berry weight on an average year. Year to year variability in weather related berry growth adds error to this table. Information on current year berry growth can be obtained from the fredonia Vineyard Lab (or) it is strongly suggested that individual growers start collecting berry weight information from their own individual vineyard blocks.	190	47.5	38.0	31.7	27.1	23.8	21.1	19.0	17.3	15.8			12.7	11.9	10.6	9.5
th of an acre th of an acre	200	50.0	40.0	33.3	28.6	25.0	22.2	20.0	18.2	16.7	15.4	Ē	13.3	12.	11.1	10.0
	Row Spacing detern 10.0 feet row spacin	nines len a = 43.5	igth of 1/ feet = 1	100th of	an acre an acre	Exa	mple: ower has	9 foot ro	w snacin	o and o	ean nick	s 48.4 fee	t at 25 d	lave after	moold	
	9.5 feet = 45.9 feet =	= 1/100th	of an ac	cre		The	fruit weigh	hs 80 po	unds and	d the aro	wer estir	nates tha	t the ben	ries are b	etween	
	9.0 feet = 48.4 feet =	= 1/100th	n of an ac	sre		35%	and 40%	of final	berrv we	ight. Ac	cording to	o the tabl	e. the cro	op estima	teis	
	8.5 feet = 51.2 feet =	= 1/100th	n of an ac	sre		betv	veen 10.0	and 11.4	4 tons pe	er acre.	0					
	8.0 feet = 54.45 feet	= 1/100	th of an a	acre					-							
ten of an acre	7.5 feet = 58.1 feet =	= 1/100th	n of an ac	sre		Disc	claimer: table give	es the re	lationshi	p betwe	en time o	f season	and % fi	nal berry	weight on	
ien of an acre	Calculation					ans	average ye	ear. Yea	ir to year	variabili	ty in wea	ther relat	ed berry	growth a	dds error	ţ
	43, 560 square feet	per acre				this	table. Infi	ormation	n on curre	ent year	berry gro	with can	be obtain	hed from t	the	
	Divide by row spacir	ng and th	ien			Free	donia Vine	eyard Lal	b (or) it is	s strongl	v sugges	ted that is	ndividual	growers	start	
	divide by 100 to get	1/100th	of an acr	e		8	ecting ben	ry weight	t informa	tion fron	n their ow	in individu	ual viney.	ard block	ŝ	_