

**Estimated Production Costs, Gross Revenues, and Returns per Acre for
Muscadines Grapes Grown for the Wine and Juice Markets
Geneva Double Curtain Trellis System with no Irrigation**

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This budget presents the estimated costs of producing and harvesting muscadine grapes for the wine and juice markets in North Carolina, an investment analysis of muscadine grape production, and the effects of varying wholesale prices and yields on returns to land and management. The budget was developed for a representative 10 acre grape vineyard assuming a Geneva Double Curtain (GDC) trellis and without an irrigation system. It was also assumed that the management of the vineyard would be near optimal and that all recommended practices would be followed. This information can be useful for farmers considering starting a new muscadine grape vineyard or expanding an existing operation. Mention of a product or vendor does not constitute a guarantee or warranty of the product, nor does it imply recommendation of one product over another. Other products may also be suitable depending on soils, weather conditions, farm history, and pest pressures

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**Estimated Production Costs per Acre for Muscadine Grapes Grown for the Wine and
Juice Markets, Geneva Double Curtain Trellis System without Irrigation
Site Preparation**

Month	Type of Operation	Equipment Costs	Materials Costs	Labor Costs	Total Costs	Your Costs
August						
	Attend Grower Meetings		5.00	8.45	13.45	
	Apply Herbicide	3.43		5.28	8.71	
	glyphosate		17.50		17.50	
	Total August	\$3.43	\$22.50	\$13.73	\$39.65	
November						
	Plow Field	12.31		13.94	26.25	
	Disc Field	5.31		6.97	12.28	
	Order & Plant cover crop	2.93	50.00	4.44	57.36	
	Custom Applied Nutrients	2.93		4.44	7.36	
	Lime		77.00		77.00	
	Triple Superphosphate		20.40		20.40	
	Order plants		500.50	2.64	503.14	
	Total November	23.48	647.90	32.42	703.80	
December						
	Order trellis supplies*		3,092.48	10.56	3,103.04	
	Total December	0.00	3,092.48	10.56	3,103.04	
Annual Administrative Costs						
	Real Estate Taxes		0.00		0.00	
	Management Fee		0.00		0.00	
	Net Land Rent		0.00		0.00	
	Miscellaneous		20.00		20.00	
	Overhead (Utilities, legal fees, etc)		15.00		15.00	
	Total Annual Administrative Costs	0.00	35.00	0.00	35.00	
Seasonal Costs						
	1/2 Ton Pick-up	16.48		25.34	41.82	
	Operating Capital		0.00		0.00	
	Total Seasonal Costs	16.48	0.00	25.34	41.82	
TOTAL PREPARATION COSTS		43.38	3,797.88	82.05	3,923.31	

Estimated Materials Costs for a Geneva Double Curtain Trellis for a 10-Acre Vineyard

Trellis Materials	Rate/ Acre	Unit	Cost per Unit	Total Cost	Your Cost
Treated 4" x 8' Posts	1820	ea	5.00	9,100.00	_____
Treated 6" x 8' Posts (end brace posts)	220	ea	7.00	1,540.00	_____
Treated 6" x 6 1/2' Posts (inside brace posts)	220	ea	9.40	2,068.00	_____
Treated 4" x 4" x 6' Timbers	220	ea	5.00	1,100.00	_____
Wire, 100-pound rolls of # 9 galvanized	45	roll	74.00	3,330.00	_____
Metalic crossarms	1820	ea	6.50	11,830.00	_____
Spreader 2"x4"x45"	220	ea	2.00	440.00	_____
3/8 x 8" galvanized bolt	1820	ea	0.80	1,456.00	_____
3/16" bolts	220	ea	0.24	52.80	_____
Staples	10	lb	0.80	8.00	_____
Total Trellis Materials Cost				\$30,924.80	_____

Estimated Construction Costs for a Geneva Double Trellis for a 10-Acre Vineyard

Operation	Equipment Costs	Materials Costs	Labor		Total Costs	Your Costs
			Hours	Costs		
Materials Cost		30,924.80			30,924.80	_____
Mark rows and post locations			40	330.00	330.00	_____
Distribute posts	297.84		35	288.75	586.59	_____
Drive line posts (2 workers @ 3min/post)	900.86		180	1,485.00	2,385.86	_____
Auger and set end posts (2 workers @ 5 min/post)	301.89		73	602.25	904.14	_____
Construct Trellis			500	4,125.00	4,125.00	_____
Total Costs	\$1,500.59	\$30,924.80	828	\$6,831.00	\$39,256.39	_____

**Estimated Production Costs per Acre for Muscadine Grapes Grown for the Wine and
Juice Markets, Geneva Double Curtain Trellis System without Irrigation
First Year: Planting and Trellis Construction**

Month	Type of Operation	Equipment Costs	Materials Costs	Labor Costs	Total Costs	Your Costs
January						
Total January		\$0.00	\$0.00	\$0.00	\$0.00	
February						
Total February		\$0.00	\$0.00	\$0.00	\$0.00	
March						
	Build Trellis	150.06		683.10	833.16	
	Auger vine holes ¹	8.40		230.63	239.03	
		0.00		0.00	0.00	
Total March		\$158.46	\$0.00	\$913.73	\$1,072.19	
April						
	Order Pruning Equipment			10.56	10.56	
	Plant vines (2 min/vine)			63.36	63.36	
Total April		\$0.00	\$0.00	\$73.92	\$73.92	
May						
	Order & Replant ²		24.75	10.56	35.31	
	Growth tube installation		116.48	36.96	153.44	
	Fertilize	4.12		6.34	10.46	
	10-10-10		6.54		6.54	
	Apply Herbicide	3.42		5.28	8.70	
	flumioxazin (Chateau)		37.50		37.50	
	Train/Prune (16 min/vine)	0.00		506.88	506.88	
	Mow alleys	5.59		6.34	11.93	
Total May		\$13.14	\$185.27	\$572.35	\$770.76	
June						
	Apply Herbicide	3.42		5.28	8.70	
	flumioxazin + paraquat		50.70		50.70	
	Fertilize	4.12		6.34	10.46	
	10-10-10		6.54		6.54	
	Train/Prune (8 min/vine)	0.00		253.44	253.44	
	Mow alleys (2X)	11.19		12.67	23.86	
Total June		\$18.73	\$57.24	\$277.73	\$353.70	
July						
	Fertilize	4.12		6.34	10.46	
	10-10-10		6.54		6.54	
	Apply Insecticide	3.42		5.28	8.70	
	chlorpyrifos (Lorsban 4E)		9.00		9.00	
	Train/Prune (8 min/vine)	0.00		253.44	253.44	
	Mow alleys (2X)	11.19		12.67	23.86	
Total July		\$18.73	\$15.54	\$277.73	\$312.00	
August						
	Attend Grower Meetings		5.00	8.45	13.45	
	Apply Herbicide	3.42		5.28	8.70	
	sethoxydim (Poast 1.5 EC)		17.06		17.06	
	Mow alleys	5.59		6.34	11.93	
Total August		\$9.02	\$22.06	\$20.06	\$51.15	
September						
	Growth tube removal			18.48	18.48	
Total September		\$0.00	\$0.00	\$18.48	\$18.48	
October - December						
	Apply Herbicide (spot spray)	3.35		5.28	8.63	
	glyphosate		17.50		17.50	
Total October - December		\$3.35	\$17.50	\$5.28	\$26.13	
Annual Administrative Costs						
	Real Estate Taxes		0.00		0.00	
	Management Fee		0.00		0.00	
	Net Land Rent		0.00		0.00	
	Miscellaneous		40.00		40.00	
	Overhead (Utilities, legal fees, etc.)		30.00		30.00	
	Interest on Accumulating Investment		0.00		0.00	
Total Annual Administrative Costs			\$70.00		\$70.00	
Seasonal Costs						
	1/2 Ton Pick-up	32.96		50.69	83.64	
	Operating Capital		0.00		0.00	
Total Seasonal Costs		\$32.96	\$0.00	\$50.69	\$83.64	
TOTAL YEAR 1 PLANTING COSTS		\$254.38	\$367.61	\$2,209.97	\$2,831.97	

Notes:

¹Auger vine holes: 2 workers @ 3 min/vine

²Order & Replant 5% of the initial plants

**Estimated Production Costs per Acre for Muscadine Grapes Grown for the Wine and Juice Markets, Geneva Double Curtain Trellis System without Irrigation
Second Year: First Harvest (yield = 1.0 ton per acre)**

Month	Type of Operation	Equipment Costs	Materials Costs	Labor Costs	Total Costs	Your Costs
January						
	Dormant Pruning (20 min/vine)	0.00		633.60	633.60	
Total January		\$0.00	\$0.00	\$633.60	\$633.60	
February						
Total February		\$0.00	\$0.00	\$0.00	\$0.00	
March						
	Fertilize	4.12		6.34	10.46	
	10-10-10		13.08		13.08	
	Apply Herbicide	3.42		5.28	8.70	
	flumioxazin (Chateau)+glyphosate		55.88		55.88	
Total March		\$ 7.54	\$ 68.96	\$ 11.62	\$ 88.11	
April						
	Mow alleys	5.59		6.34	11.93	
Total April		\$5.59	\$0.00	\$6.34	\$11.93	
May						
	Fertilize	4.12		6.34	10.46	
	10-10-10		13.08		13.08	
	Train/Prune (16 min/vine)	0.00		506.88	506.88	
	Mow alleys	5.59		6.34	11.93	
Total May		\$9.71	\$13.08	\$519.55	\$542.35	
June						
	Leaf Analysis		4.00	2.64	6.64	
	Apply Herbicide	3.42		5.28	8.70	
	flumioxazin + glufosinate (Rely)		111.50		111.50	
	Mow alleys (2X)	11.19		12.67	23.86	
Total June		\$14.61	\$115.50	\$20.59	\$150.71	
July						
	Fertilize	4.12		6.34	10.46	
	10-10-10		13.08		13.08	
	Apply Insecticide	3.42		5.28	8.70	
	chlorpyrifos (Lorsban 4E)		7.74		7.74	
	Mow alleys (2X)	11.19		12.67	23.86	
Total July		\$18.73	\$20.82	\$24.29	\$63.84	
August						
	Attend Grower Meetings		5.00	8.45	13.45	
	Apply Herbicide	3.42		5.28	8.70	
	sethoxydim (Poast 1.5 EC)		17.06		17.06	
	Mow alleys	5.59		6.34	11.93	
Total August		\$9.02	\$22.06	\$20.06	\$51.15	
September						
	Custom Harvest ¹	111.81		2.64	114.45	
Total September		\$111.81	\$0.00	\$2.64	\$114.45	
October						
	Apply Herbicide (spot spray)	3.35		5.28	8.63	
	glyphosate		17.50		17.50	
Total October		\$3.35	\$17.50	\$5.28	\$26.13	
November						
	Repair Trellis			31.68	31.68	
Total November		\$0.00	\$0.00	\$31.68	\$31.68	
December						
Total December		\$0.00	\$0.00	\$0.00	\$0.00	
Annual Administrative Costs						
	Real Estate Taxes		0.00		0.00	
	Management Fee		0.00		0.00	
	Net Land Rent		0.00		0.00	
	Miscellaneous		40.00		40.00	
	Overhead (Utilities, legal fees, etc.)		30.00		30.00	
	Interest on Accumulating Investment		0.00		0.00	
Total Annual Administrative Costs		\$0.00	\$70.00		\$70.00	
Seasonal Costs						
	1/2 Ton Pick-up	32.96		50.69	83.64	
	Operating Capital		0.00		0.00	
Total Seasonal Costs		\$32.96	\$0.00	\$50.69	\$83.64	
TOTAL SECOND YEAR COSTS		\$213.33	\$327.92	\$1,326.34	\$1,867.59	

Notes:

¹Custom Harvest: Farmers provides a 60 HP tractor.

**Estimated Production Costs per Acre for Muscadine Grapes Grown for the Wine and Juice Markets, Geneva Double Curtain Trellis System without Irrigation
Third Year: Second Harvest (yield = 3.1 tons per acre)**

Month	Type of Operation	Equipment Costs	Materials Costs	Labor Costs	Total Costs	Your Costs
January						
	Dormant mechanical pruning	255.00			255.00	
	Dormant pruning (20min/vine)	0.00		633.60	633.60	
Total January		\$255.00	\$0.00	\$633.60	\$888.60	
February						
Total February		\$0.00	\$0.00	\$0.00	\$0.00	
March						
	Fertilize	2.09		3.17	5.26	
	10-10-10		19.62		19.62	
	Apply Herbicide	3.42		5.28	8.70	
	flumioxazin (Chateau) +glyphosate		55.88		55.88	
Total March		\$5.52	\$75.50	\$8.45	\$89.46	
April						
	Mow alleys	5.59		6.34	11.93	
Total April		\$5.59	\$0.00	\$6.34	\$11.93	
May						
	Fertilize	2.09		3.17	5.26	
	10-10-10		19.62		19.62	
	Apply Insecticide (Prebloom)	5.72		5.28	11.00	
	carbaryl (Sevin 80 WP)		6.30		6.30	
	Apply Fungicide	5.72		5.28	11.00	
	myclobutanil (Nova 40 W)		12.00		12.00	
	Mow alleys	5.59		6.34	11.93	
Total May		\$19.12	\$37.92	\$20.07	\$77.11	
June						
	Leaf Analysis		4.00	2.64	6.64	
	Apply Herbicide	3.42		5.28	8.70	
	flumioxazin + glufosinate (Rely)		111.50		111.50	
	Apply Insecticide	5.72		5.28	11.00	
	carbaryl (Sevin 80 WP)		7.88		5.88	
	Apply Fungicide	5.72		5.28	11.00	
	captan (Captan 50 WP)		13.60		13.60	
	Mow alleys (2X)	11.19		12.67	23.86	
Total June		\$26.04	\$136.98	\$31.16	\$194.18	
July						
	Fertilize	2.09		3.17	5.26	
	10-10-10		19.62		19.62	
	Apply Insecticide	3.42		5.28	11.00	
	chlorpyrifos (Lorsban 4E)		9.00		9.00	
	Apply Fungicide	5.72		5.28	11.00	
	captan (Captan 50 WP)		13.60		13.60	
	Mow alleys (2X)	11.19		12.67	23.86	
Total July		\$22.42	\$42.22	\$26.40	\$91.05	
August						
	Attend Grower Meetings		5.00	8.45	13.45	
	Apply Herbicide	3.42		5.28	8.70	
	sethoxydim (Poast 1.5 EC)		17.06		17.06	
	Mechanical pruning (summer)	127.50			127.50	
	Mow alleys	5.59		6.34	11.93	
Total August		\$136.52	\$22.06	\$20.06	\$178.65	
September						
	Custom Harvest ¹	319.81		2.64	322.45	
Total September		\$319.81	\$0.00	\$2.64	\$322.45	
October						
	Apply Herbicide (spot spray)	3.35		5.28	8.63	
	glyphosate		17.50		17.50	
Total October		\$3.35	\$17.50	\$5.28	\$26.13	
November						
	Repair Trellis			21.12	21.12	
Total November		\$0.00	\$0.00	\$21.12	\$21.12	
December						
Total December		\$0.00	\$0.00	\$0.00	\$0.00	
Annual Administrative Costs						
	Real Estate Taxes		0.00		0.00	
	Management Fee		0.00		0.00	
	Net Land Rent		0.00		0.00	
	Miscellaneous		40.00		40.00	
	Overhead (Utilities, legal fees, etc.)		30.00		30.00	
	Interest on Accumulating Investment		0.00		0.00	
Total Annual Administrative Costs			\$70.00		\$70.00	
Seasonal Costs						
	1/2 Ton Pick-up	32.96		50.69	83.64	
	Operating Capital		0.00		0.00	
Total Seasonal Costs		\$32.96	\$0.00	\$50.69	\$83.64	
TOTAL THIRD YEAR COSTS		\$826.32	\$402.17	\$825.81	\$2,054.31	

Notes:

¹Custom Harvest: Farmers provides a 60 HP tractor.

**Estimated Production Costs per Acre for Muscadine Grapes Grown for the Wine and Juice Markets, Geneva Double Curtain Trellis System without Irrigation
Fourth through Twentieth Years (yield = 8.3 tons per acre)**

Month	Type of Operation	Equipment Costs	Materials Costs	Labor Costs	Total Costs	Your Costs
January						
	Dormant mechanical pruning	255.00			255.00	
	Dormant pruning (20min/vine)	0.00		633.60	633.60	
Total January		\$255.00	\$0.00	\$633.60	\$888.60	
February						
Total February		\$0.00	\$0.00	\$0.00	\$0.00	
March						
	Set up irrigation system	0.00		0.00	0.00	
	Fertilize	2.09		3.17	5.26	
	10-10-10		39.24		39.24	
	Apply Herbicide	3.42		5.28	8.70	
	flumioxazin (Chateau) +glyphosate		55.88		55.88	
Total March		\$5.52	\$95.12	\$8.45	\$109.08	
April						
	Mow alleys	5.59		4.95	10.54	
Total April		\$5.59	\$0.00	\$4.95	\$10.54	
May						
	Fertilize	2.09		3.17	5.26	
	10-10-10		26.16		26.16	
	Apply Insecticide (Prebloom)	5.72		5.28	11.00	
	carbaryl (Sevin 80 WP)		6.30		6.30	
	Apply Fungicide	11.43		10.57	22.00	
	myclobutanil (Nova 40 W) 2X		32.00		32.00	
	Spray Solubor (20% B)	5.72	0.70	5.28	11.70	
	Mow alleys	5.59		4.95	10.54	
Total May		\$30.55	\$65.16	\$29.25	\$124.96	
June						
	Leaf Analysis		4.00	2.64	6.64	
	Apply Herbicide	3.42		5.28	8.70	
	flumioxazin + glufosinate (Rely)		111.50		111.50	
	Apply Insecticide	5.72		5.28	11.00	
	carbaryl (Sevin 80 WP)		7.88		7.88	
	Apply Fungicide	5.72		5.28	11.00	
	azoxystrobin (Abound 2.08 SC)		19.79		19.79	
	Apply Fungicide	5.72		5.28	11.00	
	captan+thiophanatemethyl (Topsin)		42.10		42.10	
	Mow alleys (2X)	11.19		9.90	21.09	
Total June		\$31.76	\$185.26	\$33.67	\$250.70	
July						
	Apply Fungicide	5.72		5.28	11.00	
	captan (Captan 50 WP)		13.60		13.60	
	Apply Fungicide	5.72		5.28	11.00	
	azoxystrobin (Abound 2.08 SC)		19.79		19.79	
	Apply Insecticide	3.42		5.28	8.70	
	chlorpyrifos (Lorsban 4E)		9.00		9.00	
	Mow alleys (2X)	11.19		9.90	21.09	
Total July		\$26.04	\$42.39	\$25.75	\$94.18	
August						
	Attend Grower Meetings		5.00	8.45	13.45	
	Apply Herbicide	3.42		5.28	8.70	
	sethoxydim (Poast 1.5 EC)		17.06		17.06	
	Mechanical pruning (summer)	127.50			127.50	
	Mow alleys	5.59		4.95	10.54	
Total August		\$136.52	\$22.06	\$18.68	\$177.26	
September						
	Custom Harvest ¹	839.81		2.64	842.45	
Total September		\$839.81	\$0.00	\$2.64	\$842.45	
October						
	Apply Herbicide (spot spray)	3.35		5.28	8.63	
	glyphosate		17.50		17.50	
Total October		\$3.35	\$17.50	\$5.28	\$26.13	
November						
	Repair Trellis			42.24	42.24	
Total November		\$0.00	\$0.00	\$42.24	\$42.24	
December						
Total December		\$0.00	\$0.00	\$0.00	\$0.00	
Annual Administrative Costs						
	Real Estate Taxes		0.00		0.00	
	Management Fee		0.00		0.00	
	Net Land Rent		0.00		0.00	
	Miscellaneous		40.00		40.00	
	Overhead (Utilities, legal fees, etc.)		30.00		30.00	
	Interest on Accumulating Investment		0.00		0.00	
Total Annual Administrative Costs			\$70.00		\$70.00	
Seasonal Costs						
	1/2 Ton Pick-up	32.96		50.69	83.64	
	Operating Capital		0.00		0.00	
Total Seasonal Costs		\$32.96	\$0.00	\$50.69	\$83.64	
TOTAL ANNUAL COSTS		\$1,367.09	\$497.49	\$855.20	\$2,719.78	

Notes:

¹Custom Harvest: Farmers provides a 60 HP tractor.

**Estimated Monthly and Annual Production Costs per Acre for Muscadine Grapes
Grown for the Wine and Juice Markets
Geneva Double Curtain Trellis System without Irrigation**

Month & Year	Equipment Costs	Material Costs	Labor Costs	Total Costs	Your Costs
Site Preparation					
January	0.00	0.00	0.00	0.00	_____
February	0.00	0.00	0.00	0.00	_____
March	0.00	0.00	0.00	0.00	_____
April	0.00	0.00	0.00	0.00	_____
May	0.00	0.00	0.00	0.00	_____
June	0.00	0.00	0.00	0.00	_____
July	0.00	0.00	0.00	0.00	_____
August	3.43	22.50	13.73	39.65	_____
September	0.00	0.00	0.00	0.00	_____
October	0.00	0.00	0.00	0.00	_____
November	23.48	647.90	32.42	703.80	_____
December	0.00	3,092.48	10.56	3,103.04	_____
Annual Charges	0.00	35.00	0.00	35.00	_____
Seasonal Charges	16.48	0.00	25.34	41.82	_____
Total Site Preparation	\$43.38	\$3,797.88	\$82.05	\$3,923.31	_____
First Year					
January	0.00	0.00	0.00	0.00	_____
February	0.00	0.00	0.00	0.00	_____
March	158.46	0.00	913.73	1,072.19	_____
April	0.00	0.00	73.92	73.92	_____
May	13.14	185.27	572.35	770.76	_____
June	18.73	57.24	277.73	353.70	_____
July	18.73	15.54	277.73	312.00	_____
August	9.02	22.06	20.06	51.15	_____
September	0.00	0.00	18.48	18.48	_____
October	3.35	17.50	5.28	26.13	_____
November	0.00	0.00	0.00	0.00	_____
December	0.00	0.00	0.00	0.00	_____
Annual Charges	0.00	70.00	0.00	70.00	_____
Seasonal Charges	32.96	0.00	50.69	83.64	_____
Total First Year	\$254.38	\$367.61	\$2,209.97	\$2,831.97	_____
Second Year (Yield = 1 ton/A)					
January	0.00	0.00	633.60	633.60	_____
February	0.00	0.00	0.00	0.00	_____
March	7.54	68.96	11.62	88.11	_____
April	5.59	0.00	6.34	11.93	_____
May	9.71	13.08	519.55	542.35	_____
June	14.61	115.50	20.59	150.71	_____
July	18.73	20.82	24.29	63.84	_____
August	9.02	22.06	20.06	51.15	_____
September	111.81	0.00	2.64	114.45	_____
October	3.35	17.50	5.28	26.13	_____
November	0.00	0.00	31.68	31.68	_____
December	0.00	0.00	0.00	0.00	_____
Annual Charges	0.00	70.00	0.00	70.00	_____
Seasonal Charges	32.96	0.00	50.69	83.64	_____
Total Second Year	\$213.33	\$327.92	\$1,326.34	\$1,867.59	_____
Third Year (Yield = 3.1 tons/A)					
January	255.00	0.00	633.60	888.60	_____
February	0.00	0.00	0.00	0.00	_____
March	5.52	75.50	8.45	89.46	_____
April	5.59	0.00	6.34	11.93	_____
May	19.12	37.92	20.07	77.11	_____
June	26.04	136.98	31.16	194.18	_____
July	22.42	42.22	26.40	91.05	_____
August	136.52	22.06	20.06	178.65	_____
September	319.81	0.00	2.64	322.45	_____
October	3.35	17.50	5.28	26.13	_____
November	0.00	0.00	21.12	21.12	_____
December	0.00	0.00	0.00	0.00	_____
Annual Charges	0.00	70.00	0.00	70.00	_____
Seasonal Charges	32.96	0.00	50.69	83.64	_____
Total Third Year	\$826.32	\$402.17	\$825.81	\$2,054.31	_____
Fourth Year through Twentieth Year (Yield = 8.3 tons /A)					
January	255.00	0.00	633.60	888.60	_____
February	0.00	0.00	0.00	0.00	_____
March	5.52	95.12	8.45	109.08	_____
April	5.59	0.00	4.95	10.54	_____
May	30.55	65.16	29.25	124.96	_____
June	31.76	185.26	33.67	250.70	_____
July	26.04	42.39	25.75	94.18	_____
August	136.52	22.06	18.68	177.26	_____
September	839.81	0.00	2.64	842.45	_____
October	3.35	17.50	5.28	26.13	_____
November	0.00	0.00	42.24	42.24	_____
December	0.00	0.00	0.00	0.00	_____
Annual Charges	0.00	70.00	0.00	70.00	_____
Seasonal Charges	32.96	0.00	50.69	83.64	_____
Total Annual Cost	\$1,367.09	\$497.49	\$855.20	\$2,719.78	_____

**Monthly Labor Estimates per Acre for Muscadine Grapes
Grown for the Wine and Juice Markets
Geneva Double Curtain Trellis System without Irrigation**

Month & Year	Labor (Person Hours)	Your Estimate
Site Preparation		
January	0.000	_____
February	0.000	_____
March	0.000	_____
April	0.000	_____
May	0.000	_____
June	0.000	_____
July	0.000	_____
August	1.300	_____
September	0.000	_____
October	0.000	_____
November	3.070	_____
December	1.000	_____
Miscellaneous Labor	2.400	_____
Total Site Preparation	7.770	_____
First Year		
January	0.000	_____
February	0.000	_____
March	104.640	_____
April	7.000	_____
May	54.200	_____
June	26.300	_____
July	26.300	_____
August	1.900	_____
September	1.750	_____
October	0.500	_____
November	0.500	_____
December	0.500	_____
Miscellaneous Labor	4.800	_____
Total First Year	228.390	_____
Second Year		
January	60.000	_____
February	0.000	_____
March	1.100	_____
April	0.600	_____
May	49.200	_____
June	1.950	_____
July	2.300	_____
August	1.900	_____
September	0.250	_____
October	0.500	_____
November	3.000	_____
December	0.000	_____
Miscellaneous Labor	4.800	_____
Total Second Year	125.600	_____
Third Year		
January	60.000	_____
February	0.000	_____
March	0.800	_____
April	0.600	_____
May	1.901	_____
June	2.951	_____
July	2.500	_____
August	1.900	_____
September	0.250	_____
October	0.500	_____
November	3.000	_____
December	0.000	_____
Miscellaneous Labor	4.800	_____
Total Third Year	79.202	_____
Fourth Year		
January	60.000	_____
February	0.000	_____
March	0.800	_____
April	0.600	_____
May	2.902	_____
June	3.451	_____
July	2.701	_____
August	1.900	_____
September	0.250	_____
October	0.500	_____
November	4.000	_____
December	0.000	_____
Miscellaneous Labor	4.800	_____
Total Fourth Year	81.904	_____

**Breakeven and Net Present Value Analysis for Muscadine Grapes Grown for the Wine
and Juice Markets, Geneva Double Curtain Trellis System without Irrigation**

Year	Yield per Acre	Total Costs per Acre	Total Revenue per Acre	Net Cash Flow per Acre	Accumulated Cash Flow	Discount Factor 6%	Present Value of Net Cash Flow
0	0.0	5,015.01	0.00	(5,015.01)	(5,015.01)	1.00	(5,015.01)
1	0.0	3,403.41	0.00	(3,403.41)	(8,418.42)	0.94	(3,210.76)
2	1.0	1,867.59	520.00	(1,347.59)	(9,766.01)	0.89	(1,199.35)
3	3.1	2,054.31	1,560.00	(494.31)	(10,260.32)	0.84	(415.03)
4	8.3	2,719.78	4,160.00	1,440.22	(8,820.10)	0.79	1,140.79
5	8.3	2,719.78	4,160.00	1,440.22	(7,379.89)	0.75	1,076.21
6	8.3	2,719.78	4,160.00	1,440.22	(5,939.67)	0.70	1,015.30
7	8.3	2,719.78	4,160.00	1,440.22	(4,499.45)	0.67	957.83
8	8.3	2,719.78	4,160.00	1,440.22	(3,059.24)	0.63	903.61
9	8.3	2,719.78	4,160.00	1,440.22	(1,619.02)	0.59	852.46
10	8.3	3,124.78	4,160.00	1,035.22	(583.81)	0.56	578.06
11	8.3	2,719.78	4,160.00	1,440.22	856.41	0.53	758.69
12	8.3	3,074.74	4,160.00	1,085.26	1,941.67	0.50	539.34
13	8.3	2,719.78	4,160.00	1,440.22	3,381.88	0.47	675.23
14	8.3	2,719.78	4,160.00	1,440.22	4,822.10	0.44	637.01
15	8.3	2,792.86	4,160.00	1,367.14	6,189.24	0.42	570.46
16	8.3	2,719.78	4,160.00	1,440.22	7,629.45	0.39	566.94
17	8.3	2,719.78	4,160.00	1,440.22	9,069.67	0.37	534.85
18	8.3	2,719.78	4,160.00	1,440.22	10,509.89	0.35	504.57
19	8.3	2,719.78	4,160.00	1,440.22	11,950.10	0.33	476.01
20	8.3	2,224.23	4,160.00	1,935.77	13,885.87	0.31	603.58
Total							\$2,550.76

Breakeven Year	<u>11th Year</u>
Total Accumulated Cah Flow	<u>\$13,885.87</u>
Net Present Value	<u>\$2,550.76</u>
Internal Rate of Return	<u>8.50%</u>

**Estimated Returns to Land & Management per Acre for varying Prices and Yields for Muscadine Grapes Grown for the Wine and Juice Markets
Geneva Double Curtain Trellis System without Irrigation**

Wholesale Price	Marketable Yield per Acre					Breakeven Yield
	(Tons)					
(\$/Ton)	7.49	7.9	8.32	8.74	9.15	(Ton)
300	(1,508.76)	(1,426.76)	(1,342.76)	(1,258.76)	(1,176.76)	15.03
400	(759.76)	(636.76)	(510.76)	(384.76)	(261.76)	10.02
500	(10.76)	153.24	321.24	489.24	653.24	7.52
550	363.74	548.24	737.24	926.24	1,110.74	6.68
600	738.24	943.24	1,153.24	1,363.24	1,568.24	6.01