

**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 Drip 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 a drip 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 with Drip 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 with Drip Irrigation
First Year: Planting and Trellis Construction**

Month	Type of Operation	Equipment Costs	Materials Costs	Labor Costs	Total Costs	Your Costs
March						
	Build Trellis	150.06		683.10	833.16	
	Auger vine holes ¹	8.40		230.63	239.03	
	Irrigation system preparation			12.67	12.67	
Total March		158.46	0.00	926.40	1,084.86	
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	
	Irrigate	6.78		6.34	13.12	
	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		19.92	185.27	578.69	783.88	
June						
	Apply Herbicide	3.42		5.28	8.70	
	flumioxazin + paraquat		50.70		50.70	
	Irrigate	6.78		6.34	13.12	
	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		25.52	57.24	284.06	366.82	
July						
	Irrigate	6.78		6.34	13.12	
	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		25.52	15.54	284.06	325.12	
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	
	Irrigate	6.78		6.34	13.12	
	Mow alleys	5.59		6.34	11.93	
Total August		15.80	22.06	26.40	64.26	
September						
	Irrigate	6.78		6.34	13.12	
	Growth tube removal			18.48	18.48	
Total September		6.78	0.00	24.82	31.60	
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 FIRST YEAR COSTS		288.29	367.61	2,254.32	2,910.23	

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 Market, Geneva Double Curtain Trellis System with Drip Irrigation
Second Year: First Harvest (yield = 1.2 tons 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						
	Irrigation system preparation			12.67	12.67	
	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	\$24.29	\$100.79	
April						
	Irrigate	0.00		0.00	0.00	
	Mow alleys	5.59		6.34	11.93	
Total April		\$5.59	\$0.00	\$6.34	\$11.93	
May						
	Irrigate	13.56		12.67	26.24	
	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		\$23.28	\$13.08	\$532.22	\$568.58	
June						
	Leaf Analysis		4.00	2.64	6.64	
	Irrigate	13.56		12.67	26.24	
	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		\$28.18	\$115.50	\$33.26	\$176.94	
July						
	Irrigate	13.56		12.67	26.24	
	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		\$32.30	\$20.82	\$36.96	\$90.08	
August						
	Attend Grower Meetings		5.00	8.45	13.45	
	Irrigate	13.56		12.67	26.24	
	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		\$22.58	\$22.06	\$32.74	\$77.38	
September						
	Custom harvesting ¹	132.61		2.64	135.25	
	Irrigate	13.56		12.67	26.24	
Total September		\$146.17	\$0.00	\$15.31	\$161.49	
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 fee, 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		\$301.95	\$327.92	\$1,402.37	\$2,032.24	

Notes:

¹Custom harvesting: Grower 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 with Drip Irrigation
Third Year: Second Harvest (yield = 3.7 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						
	Irrigation system preparation			12.67	12.67	
	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	\$21.12	\$102.13	
April						
	Irrigate	0.00		0.00	0.00	
	Mow alleys	5.59		6.34	11.93	
Total April		\$5.59	\$0.00	\$6.34	\$11.93	
May						
	Irrigate	20.35		19.01	39.35	
	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		\$39.46	\$37.92	\$39.08	\$116.46	
June						
	Leaf Analysis		4.00	2.64	6.64	
	Irrigate	20.35		19.01	39.35	
	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	
	captan (Captan 50 WP)		13.60		13.60	
	Mow alleys (2X)	11.19		12.67	23.86	
Total June		\$46.39	\$136.98	\$50.17	\$233.53	
July						
	Irrigate	20.35		19.01	39.35	
	Fertilize	2.09		3.17	5.26	
	10-10-10		19.62		19.62	
	Apply Insecticide	3.42		5.28	8.70	
	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		\$42.77	\$42.22	\$45.41	\$130.40	
August						
	Attend Grower Meetings		5.00	8.45	13.45	
	Irrigate	20.35		19.01	39.35	
	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		\$156.87	\$22.06	\$39.07	\$218.00	
September						
	Custom harvesting ¹	382.21		2.64	384.85	
	Irrigate	20.35		19.01	39.35	
Total September		402.56	0.00	21.65	424.20	
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		\$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 THIRD YEAR COSTS		\$990.46	\$402.17	\$933.53	\$2,326.15	

Notes:

¹Custom harvesting: Grower 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 with Drip Irrigation
Fourth through Twentieth Years (yield = 10.0 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						
	Irrigation system preparation			12.67	12.67	
	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	\$21.12	\$121.75	
April						
	Irrigate	0.00		0.00	0.00	
	Mow alleys	5.59		4.95	10.54	
Total April		\$5.59	\$0.00	\$4.95	\$10.54	
May						
	Irrigate	20.35		19.01	39.35	
	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 (2X)	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		\$50.89	\$65.16	\$48.26	\$164.32	
June						
	Leaf Analysis		4.00	2.64	6.64	
	Irrigate	20.35		19.01	39.35	
	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		\$52.11	\$185.26	\$52.68	\$290.05	
July						
	Irrigate	20.35		19.01	39.35	
	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		\$46.39	\$42.39	\$44.76	\$133.54	
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	
	Irrigate	20.35		19.01	39.35	
	Mechanical pruning (summer)	127.50			127.50	
	Mow alleys (1) (30' min/acre)	5.59		4.95	10.54	
Total August		\$156.87	\$22.06	\$37.69	\$216.61	
September						
	Custom harvesting¹	1,007.81		2.64	1,010.45	
	Irrigate	20.35		19.01	39.35	
Total September		\$1,028.16	\$0.00	\$21.65	\$1,049.80	
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 (4th - 20th Years)		\$1,636.82	\$497.49	\$962.91	\$3,097.23	

Notes:

¹Custom harvesting: Grower 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 with Drip Irrigation

Year & Month	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 Preparation Costs	\$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	926.40	1,084.86	_____
April	0.00	0.00	73.92	73.92	_____
May	19.92	185.27	578.69	783.88	_____
June	25.52	57.24	284.06	366.82	_____
July	25.52	15.54	284.06	325.12	_____
August	15.80	22.06	26.40	64.26	_____
September	6.78	0.00	24.82	31.60	_____
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	\$288.29	\$367.61	\$2,254.32	\$2,910.23	_____
Second Year (Yield = 1.2 tons/A)					
January	0.00	0.00	633.60	633.60	_____
February	0.00	0.00	0.00	0.00	_____
March	7.54	68.96	24.29	100.79	_____
April	5.59	0.00	6.34	11.93	_____
May	23.28	13.08	532.22	568.58	_____
June	28.18	115.50	33.26	176.94	_____
July	32.30	20.82	36.96	90.08	_____
August	22.58	22.06	32.74	77.38	_____
September	146.17	0.00	15.31	161.49	_____
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	\$301.95	\$327.92	\$1,402.37	\$2,032.24	_____
Third Year (Yield = 3.7 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	21.12	102.13	_____
April	5.59	0.00	6.34	11.93	_____
May	39.46	37.92	39.08	116.46	_____
June	46.39	136.98	50.17	233.53	_____
July	42.77	42.22	45.41	130.40	_____
August	156.87	22.06	39.07	218.00	_____
September	402.56	0.00	21.65	424.20	_____
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	\$990.46	\$402.17	\$933.53	\$2,326.15	_____
Fourth Year through Twentieth Year (Yield = 10 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	21.12	121.75	_____
April	5.59	0.00	4.95	10.54	_____
May	50.89	65.16	48.26	164.32	_____
June	52.11	185.26	52.68	290.05	_____
July	46.39	42.39	44.76	133.54	_____
August	156.87	22.06	37.69	216.61	_____
September	1,028.16	0.00	21.65	1,049.80	_____
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 Costs	\$1,636.82	\$497.49	\$962.91	\$3,097.23	_____

**Monthly Labor Estimates per Acre for Muscadine Grapes
Grown for the Wine and Juice Markets
Geneva Double Curtain Trellis System with Drip Irrigation**

Year & Month	Labor	Your Estimate
	(Person Hours)	
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 Prep Year	7.770	
First Year		
January	0.000	
February	0.000	
March	105.840	
April	7.000	
May	54.800	
June	26.900	
July	26.900	
August	2.500	
September	2.350	
October	0.500	
November	0.500	
December	0.500	
Miscellaneous Labor	4.800	
Total First Year	232.590	
Second Year		
January	60.000	
February	0.000	
March	2.300	
April	0.600	
May	50.400	
June	3.150	
July	3.500	
August	3.100	
September	1.450	
October	0.500	
November	3.000	
December	0.000	
Miscellaneous Labor	4.800	
Total Second Year	132.800	
Third Year		
January	60.000	
February	0.000	
March	2.000	
April	0.600	
May	3.701	
June	4.751	
July	4.300	
August	3.700	
September	2.050	
October	0.500	
November	2.000	
December	0.000	
Miscellaneous Labor	4.800	
Total Third Year	88.402	
Fourth Year through Twentieth Year		
January	60.000	
February	0.000	
March	2.000	
April	0.600	
May	4.702	
June	5.251	
July	4.501	
August	3.700	
September	2.050	
October	0.500	
November	4.000	
December	0.000	
Miscellaneous Labor	4.800	
Total Annual Labor	92.104	

**Breakeven and Net Present Value Analysis for Muscadine Grapes Grown for the Wine
and Juice Markets, Geneva Double Curtain Trellis System with Drip 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	5,692.01	0.00	(5,692.01)	(10,707.02)	0.94	(5,369.82)
2	1.2	2,032.24	624.00	(1,408.24)	(12,115.26)	0.89	(1,253.33)
3	3.7	2,326.15	1,872.00	(454.15)	(12,569.41)	0.84	(381.32)
4	10.0	3,097.23	5,000.32	1,903.09	(10,666.32)	0.79	1,507.43
5	10.0	3,097.23	5,000.32	1,903.09	(8,763.23)	0.75	1,422.10
6	10.0	3,097.23	5,000.32	1,903.09	(6,860.13)	0.70	1,341.61
7	10.0	3,097.23	5,000.32	1,903.09	(4,957.04)	0.67	1,265.67
8	10.0	3,097.23	5,000.32	1,903.09	(3,053.95)	0.63	1,194.02
9	10.0	3,097.23	5,000.32	1,903.09	(1,150.85)	0.59	1,126.44
10	10.0	3,502.23	5,000.32	1,498.09	347.24	0.56	836.53
11	10.0	3,097.23	5,000.32	1,903.09	2,250.34	0.53	1,002.53
12	10.0	3,452.19	5,000.32	1,548.13	3,798.47	0.50	769.37
13	10.0	3,097.23	5,000.32	1,903.09	5,701.56	0.47	892.24
14	10.0	3,097.23	5,000.32	1,903.09	7,604.65	0.44	841.74
15	10.0	3,170.31	5,000.32	1,830.01	9,434.67	0.42	763.60
16	10.0	3,097.23	5,000.32	1,903.09	11,337.76	0.39	749.15
17	10.0	3,097.23	5,000.32	1,903.09	13,240.86	0.37	706.74
18	10.0	3,097.23	5,000.32	1,903.09	15,143.95	0.35	666.74
19	10.0	3,097.23	5,000.32	1,903.09	17,047.04	0.33	629.00
20	10.0	2,601.67	5,000.32	2,398.65	19,445.69	0.31	747.91
Total							\$4,443.33

Breakeven Year	10th Year
Total Accumulated Cash Flow	\$19,445.69
Net Present Value	\$4,443.33
Internal Rate of Return	9.54%

**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 with Drip Irrigation**

Wholesale Price	Marketable Yield per Acre					Breakeven Yield
	(Tons)					
(\$/Ton)	9	9.5	10	10.5	11	(Tons)
300	(1,663.94)	(1,563.94)	(1,463.94)	(1,363.94)	(1,263.94)	17.32
400	(763.94)	(613.94)	(463.94)	(313.94)	(163.94)	11.55
500	136.06	336.06	536.06	736.06	936.06	8.66
550	586.06	811.06	1,036.06	1,261.06	1,486.06	7.70
600	1,036.06	1,286.06	1,536.06	1,786.06	2,036.06	6.93