

## **Appendix A**

### **Location of Scenario 1 (Baseline) Enterprises by Soil Types and Area and Names, Characteristics, Symbol, and Acreages of Soil Types in the Study Area of Pittsylvania County**

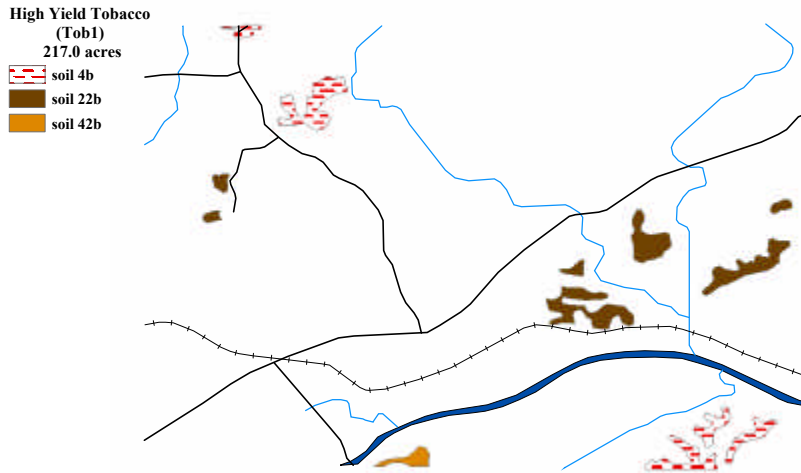


Figure A1. Soils for *Tob1*

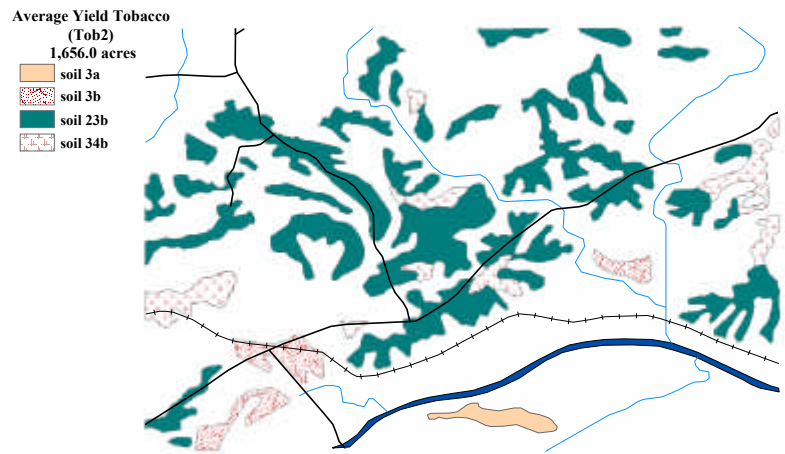


Figure A2. Soils for *Tob2*

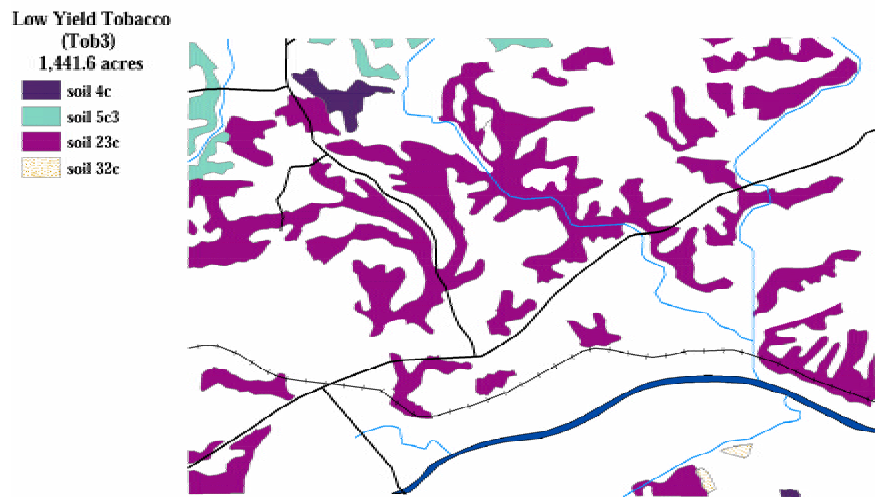


Figure A3. Soils for *Tob3*

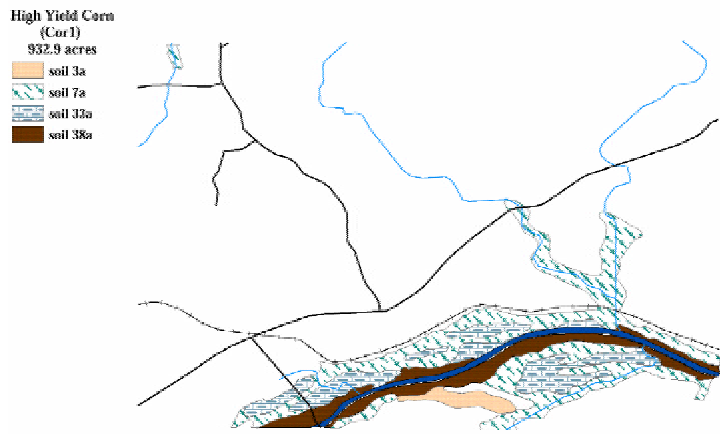


Figure A4. Soils for *Cor1*

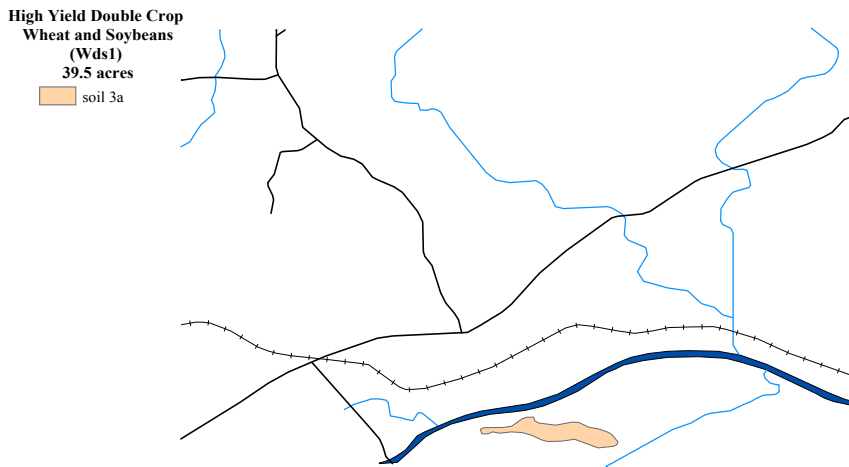


Figure A5. Soils for *Wds1*



Figure A6. Soils for *Whe1*

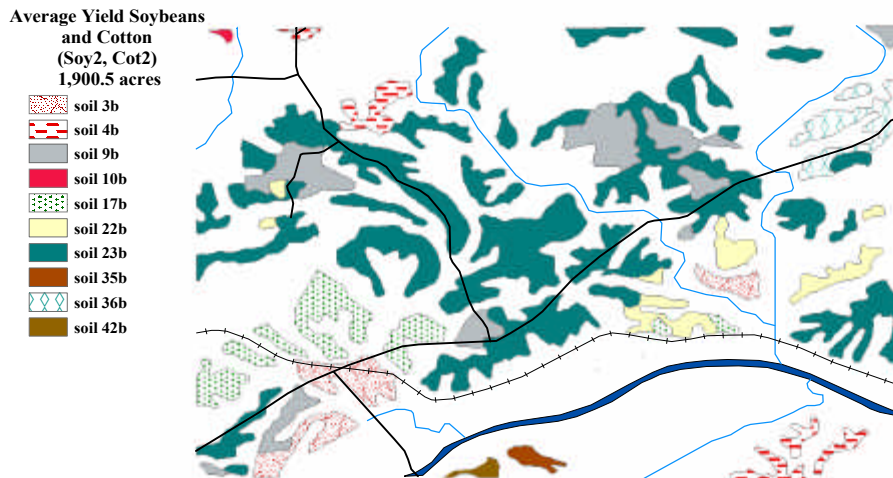


Figure A7. Soils for *Soy2* and *Cot2*

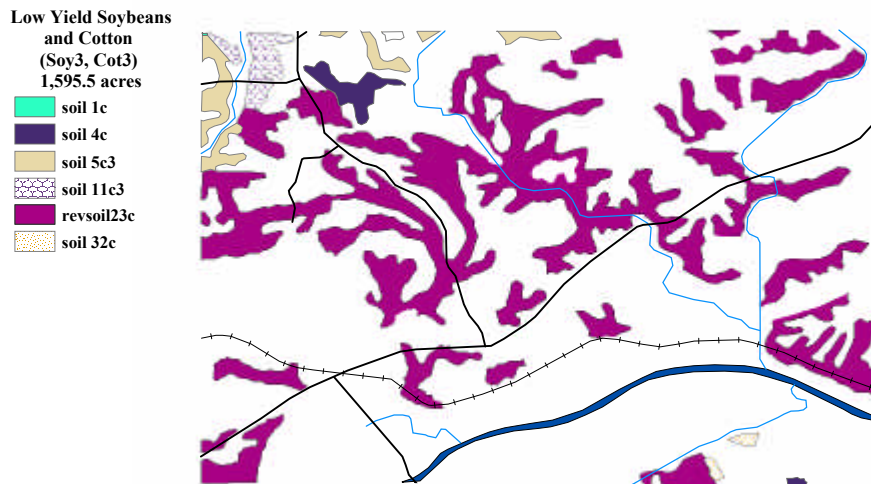


Figure A8. Soils for *Soy3* and *Cot3*

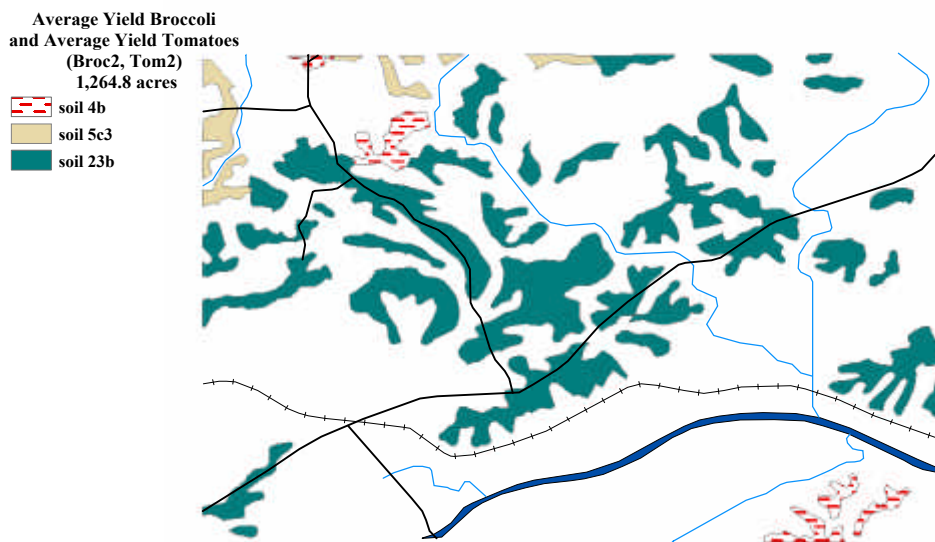


Figure A9. Soils for *Broc2* and *Tom2*

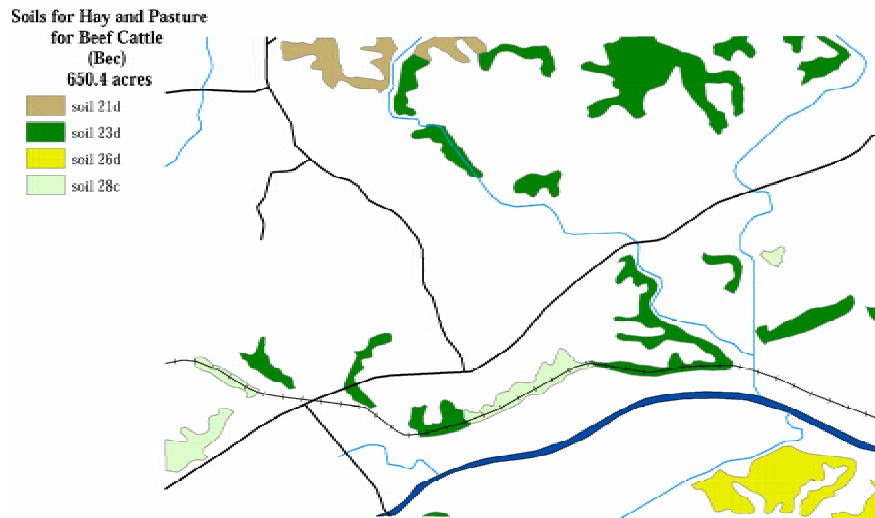


Figure A10. Soils for Hay or Pasture Only

**Table A1. Soil Names, characteristics, symbols, and acreage in study area**

Soil name	Soil map unit symbol	Area (acres)
Appling sandy loam, 7 to 15 percent slopes	1C	0.2
Ashlar fine sandy loam, 7 to 15 percent slopes	2C	5.6
Bolling fine sandy loam, 0 to 2 percent slopes	3A	39.5
Bolling fine sandy loam, 2 to 7 percent slopes	3B	117.9
Cecil sandy loam, 2 to 7 percent slopes	4B	83.1
Cecil sandy loam, 7 to 15 percent slopes	4C	41.6
Cecil sandy clay loam, 2 to 7 percent slopes	5B3	103.2
Cecil sandy clay loam, 7 to 15 percent slopes	5C3	81.4
Chenneby loam, 0 to 2 percent slopes	7A	499.1
Creedmoor fine sandy loam, 2 to 7 percent slopes	9B	230.7
Cullen loam, 2 to 7 percent slopes	10B	3.4
Cullen clay loam, 7 to 15 percent slopes	11C3	51.1
Hiwassee loam, 2 to 7 percent slopes	17B	158.4
Hiwassee cobbly sandy loam, 7 to 15 percent slopes	19C	0.3
Madison fine sandy loam, 15 to 25 percent slopes	21D	65.5
Mattaponi sandy loam, 2 to 7 percent slopes	22B	104.8
Mayodan fine sandy loam, 2 to 7 percent slopes	23B	1,078.5
Mayodan fine sandy loam, 7 to 15 percent slopes	23C	1,308.2
Mayodan fine sandy loam, 15 to 25 percent slopes	23D	388.7
Pacolet fine sandy loam, 15 to 25 percent slopes	26D	106.2
Pinkston cobbly sandy loam, 7 to 15 percent slopes	28C	90.0
Rion fine sandy loam, 7 to 15 percent slopes	32C	10.0
Riverview silt loam, 0 to 2 percent slopes	33A	209.1
Sheva fine sandy loam, 2 to 7 percent slopes	34B	189.4
Sheva fine sandy loam, 7 to 15 percent slopes	34C	93.9
State sandy loam, 0 to 4 percent slopes	35B	15.0
Stoneville silt loam, 2 to 7 percent slopes	36B	79.6
Stoneville silt loam, 7 to 15 percent slopes	36C	103.1
Toccoa fine sandy loam, 0 to 2 percent slopes	38A	185.2
Wickham sandy loam, 2 to 7 percent slopes	42B	29.2
		5,471.9

## Appendix B

**Representative Budgets for Beef Cows (*Bec*), High Yield Tobacco (*Tob1*), Tomatoes (*Tom2*), and Average Yield Wheat (*Whe2*)**

**Table B1. Beef Cows Calving in Spring (hay ration), (*Bec*) Budget for 100 Cows, 90% Calf Crop, 15% Replacement Left as a % of Cow Herd, 15% Annual Culling Rate, and 1% Annual Cow Death Loss 1999**

Item	Unit	Quantity (units)	Price (\$)	Total (\$)
<b>Receipts</b>				
Steers (45 @ 5cwt)	cwt	225.00	61.00	13,725.00
Heifers (30 @ 4.5cwt)	cwt	135.00	48.00	6,480.00
Cull cows (14 @ 10cwt)	cwt	140.00	30.00	4,200.00
Cull bull (1 @ 16cwt)	cwt	16.00	38.00	608.00
<b>Total Receipts</b>				<b>25,013.00</b>
<b>Operating Costs</b>				
Grass hay, 5% feed waste	ton	179.67	40.00	7,186.80
Corn grain, 2% feed waste	bu	396.50	3.00	1,189.50
Salt and mineral	cwt	68.00	22.00	1,496.00
Vet and medicine	head	100.00	15.33	1,533.00
Supplies	head	100.00	2.00	200.00
Replacement bull	head	1.00	1200.00	1,200.00
Pasture	acre	250.00	18.00	4,500.00
Haul cull cattle	head	15.00	5.20	78.00
Market cull cattle	head	15.00	141.16	
Haul calves	head	75.00	3.75	281.25
Market calves	head	75.00	666.60	
Building and fence repair				250.00
Utilities				125.00
Machinery (non-crop)	head	100.00	10.00	1,000.00
Labor	hours	800.00	6.25	5,000.00
<b>Total Operating Costs</b>				<b>24,847.31</b>
Annual debt payment				0.00
<b>Total Costs</b>				<b>24,847.31</b>
Net return per cow unit				1.66

Source: Modified from Virginia Cooperative Extension, Virginia Farm Management, Crop and livestock enterprise budgets, 1997.

**Table B2. Flue Cured Tobacco (Tob1) Budget for 1 Acre, Expected Yield 2,700 lb, 1999**

Item	Unit	Quantity (units)	Price (\$)	Total (\$)
<b>Receipts</b>	lb	2,700.00	1.78	<b>4,806.00</b>
<b>Operating Costs</b>				
<i>Plant Bed</i>				
Seed	oz	0.12	67.00	8.04
Fumigant	lb	7.50	2.48	18.60
Plastic cover	yds	75.00	0.10	7.50
Remay cover (2 years)	yds	75.00	0.14	5.25
Straw	bales	0.50	2.00	1.00
Fertilizer: 12-6-6	cwt	0.60	9.85	5.91
16-0-0	cwt	0.04	13.00	0.52
Fungicide	oz	0.50	1.14	0.57
Insecticide	oz	6.75	0.10	0.68
<i>Field</i>				
Lime	ton	0.56	25.00	14.00
PPI: herbicide	pts	1.35	3.15	4.25
PPI: fungicide	qts	1.13	36.37	41.10
PPI: nematocide	qts	2.25	11.23	25.27
PPI: nematocide	gal	2.25	66.55	149.74
Frow fertilizer	cwt	6.50	12.80	83.20
Tpw: insecticide	lb	1.00	10.16	10.16
Sidedress	cwt	1.50	14.25	21.38
Insecticide	lb	0.50	11.10	5.55
Insecticide	lb	2.00	10.16	20.32
Sucker control	gal	3.60	10.90	39.24
Sucker control	gal	1.50	13.31	19.97
Federal crop and hail ins.	acre	1.00	165.00	165.00
Cover crop: rye seed	bu	2.00	8.50	17.00
Tobacco curing fuel	cwt	27.00	8.01	216.27
Building ins. & electricity	acre	1.00	32.50	32.50
Marketing charges	cwt	27.00	6.79	183.33
Tractor, equip., fuel & repairs	acre	1.00	385.33	385.33
Hired labor	hours	120.00	7.36	883.20
Interest on 6-month operating capital	\$	1,978.78	9.00%	89.05
<b>Total Operating Costs</b>				<b>2,453.91</b>
Variable cost per lb. (except land & management)				0.91
Fixed costs: irrigation	\$/acre	3,324.00	20.46%	680.09
Other fixed costs				743.09
<b>Total Fixed Costs</b>				<b>1,423.18</b>
<b>Total Costs</b>				<b>3,877.09</b>
Total cost per lb. (except land & management)				1.44

Source: Modified from Virginia Cooperative Extension, Virginia Flue-Cured Tobacco, Jan1998



**Table B3. Tomatoes, Fresh Market, Staked (Sprinkler Irrigation), (Tom2) Budget for 1 Acre, Expected Yield, 1600 Cartons 25 lb Each, 1999**

Item	Unit	Quantity (units)	Price (\$)	Total (\$)
<b>Receipts</b>	25 lb carton	1,600.00	7.99	<b>12,784.00</b>
<b>Operating Costs</b>				
Nylon twine	lb	35.00	1.25	43.75
Custom harvest	carton	1,600.00	0.80	1,280.00
Lime	ton	0.70	25.00	17.50
Cartons	each	1,600.00	1.00	1,600.00
Tomato grade/pack	carton	1,600.00	1.70	2,720.00
Harvest buckets	each	30.00	1.50	45.00
Bulk bin	each	20.00	14.00	280.00
Tomato plants	hundred	55.00	9.30	511.50
Fumigation	acre	1.00	950.00	950.00
Post-emergence herbicide	acre	1.00	12.53	12.53
Post-emergence herbicide	acre	1.00	26.31	26.31
Contact insecticide	acre	5.00	8.63	43.15
Contact insecticide	acre	3.00	7.38	22.14
Contact insecticide	acre	2.00	9.35	18.70
Fungicide	acre	18.00	11.55	207.90
Fungicide	acre	2.00	23.10	46.20
Stakes	hundred	27.50	4.00	110.00
8-24-24, dry bulk	cwt	10.00	9.70	97.00
Boron	lb	12.00	0.37	4.44
13-0-44, bagged	cwt	2.00	9.00	18.00
Machinery fuel, lube, repair	acre	1.00	323.58	323.58
Labor	hour	176.00	7.50	1,320.00
Interest on 6-month operating capital	\$	7,822.45	9.00%	352.01
<b>Total Operating Costs</b>				<b>1,0005.96</b>
Variable cost per carton				6.25
Fixed costs: irrigation	\$/acre	3,324.00	20.46%	680.09
Other fixed costs				125.29
<b>Total Fixed Costs</b>				<b>805.38</b>
<b>Total Costs</b>				<b>1,0811.34</b>
Total cost (except land & management)	per carton			6.76

Source: Modified from Department of Agricultural and Resource Economics, NCSU at [http://www.ag-econ.ncsu.edu/extension/Ag\\_budgets.html](http://www.ag-econ.ncsu.edu/extension/Ag_budgets.html) last accessed 24 Apr. 2003.

**Table B4. Wheat for Grain (Whe2) Budget for 1 Acre, Expected Yield 65 bu, 1999**

Item	Unit	Quantity (units)	Price (\$)	Total (\$)
<b>Receipts</b>	bu/acre	65	2.78	<b>180.70</b>
<b>Operating Costs</b>				
<i>Preharvest Expenses</i>				
Wheat seed	bu	2.15	13.98	30.06
Other seed inoculant	bu	0.00	0.00	0.00
Nitrogen	lb	100.00	0.24	24.00
Phosphate	lb	35.00	0.24	8.40
Potash	lb	50.00	0.15	7.50
Fertilizer application	acre	3.00	5.25	15.75
Lime	ton	0.80	25.00	20.00
Herbicides	acre	1.00	6.76	6.76
Insecticides	acre	0.50	12.28	6.14
Fungicides	acre	0.33	10.56	3.48
Growth regulator	acre	1.00	6.10	6.10
Chemical application	acre	1.00	5.61	5.61
Fuel, oil, lube	acre	1.00	4.70	4.70
Repairs	acre	1.00	7.90	7.90
Preharvest labor	hour	1.13	6.25	7.06
Cash rent or land cost	acre	1.00	0.00	0.00
Crop insurance				0.00
Interest on 6-month operating capital	\$	153.46	9.00%	6.91
<i>Harvest Expenses</i>				
Fuel, oil, lube	acre	1.00	1.60	1.60
Repairs	acre	1.00	4.00	4.00
Harvest labor	hour	0.29	6.25	1.81
Hauling	bu	65.00	0.15	9.75
Storage	bu	65.00	0.00	0.00
Drying	bu	65.00	0.00	0.00
<b>Total Operating Costs</b>				<b>177.53</b>
Variable cost per bu. (except mgmt.)				2.73
Fixed costs (new mach. & equip.)				110.24
<b>Total Costs</b>				<b>287.77</b>
Total cost per bu. (except mgmt.)				4.43

Source: Modified from Virginia Cooperative Extension, Virginia Farm Management, Crop and Livestock Enterprise Budgets, 1997.



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