

Making Informed Crop Insurance Decisions The G.W. Shrub Farm

The G.W. Shrub farm is a 2,000 acre New York corn farm. George W. Shrub, the owner and manager of the farm has been struggling to make several decisions regarding crop insurance purchases. George is one of the best corn farmers that you know. He is always one of the first farmers to be done planting and harvesting his corn. He also gets some of the best yields in the county. George is nearly 50 years old and has worked hard to put himself and his family in a financially sound situation. He prides himself on his ability to make informed decisions regarding his farming enterprise. You have frequently worked with George over the last ten years and have gotten to know both his wife and his two twin boys, James and Jesse. George is married and is fortunate to have two twin boys, Jesse and James. The boys are seniors in high school and are looking forward to going to college next year.

George has been agonizing over several crop insurance decisions. He has put together quite a bit of information to help him make this decision but would like your input on 1) his need for crop insurance in particular his coverage level, and 2) what crop insurance product he should purchase (if any). He has called you to help him analyze his situation and provide him a recommendation.

He tells you that his family has been taking a family living draw of about \$28,000 per year and that he expects the full cost of the boys' college to be about \$35,000 per year (Section 3 Crop Budget Estimation). He has also provided you with a net worth statement that shows a net worth of approximately \$1.1 million. He has also provided pro-forma income, cash-flow, and balance sheet statements.

George has also provided you with a per acre operating budget for this year which shows his projected farm receipts and his direct and overhead costs. The current December 2002 CBOT price for corn is \$2.25, the typical basis is 0, and George's expected yield is 100 bu/acre. In addition, he has given you the last 10 years of yields from his farm sorted from high to low (Table 1). Table 2 shows you the revenue that George would experience under several yield and price combinations. These vary from a high of \$364 to a total disaster. George realizes that under current prices, he is not likely to "cut a fat hog" this year.

He has also presented you with information regarding the two crop insurance products that he is considering, actual production history (APH) and crop revenue coverage (CRC). Tables 3 through 6 show the yield losses necessary to trigger payments, the per acre indemnities in each situation, and most importantly the per acre revenue after premiums for various price and yield combinations.

Table 7 shows the details of the CRC insurance plan, including premiums and revenue triggers. The per acre indemnities and revenues under various price and yield combinations are shown in Table 8 and 9.

Work in teams of 2 to 3 to evaluate this information. Be prepared to respond to the following questions:

1. Does George need insurance? Why or why not? What are the key factors of his situation that led you to this decision?
2. What type of insurance product should George purchase? How likely is a substantial revenue shortfall? Which types of risk should he be most concerned about?
3. If purchasing insurance, what coverage level would you recommend to George? Why?
4. What additional information would you like to see George prepare?

We will discuss your analysis of these issues shortly so be prepared to contribute.

Farm Name:

Shrub Farms

Year:

2002

Net Farm Income Statement

Income

Cash Income		Income Adjustments		Beginning	Ending
Sales of market livestock, grain, produce	360,000	Crops held for sales or feed		-	-
Government program payments	127,120				
Crop insurance indemnity payments	-				
Other receipts	-				
		Subtotal of Adjustments	b.	-	c. -
		d. Value of Home-used Production			
a. Total Cash Income	\$ 487,120	e. Gross Farm Revenue (a-b+c+d)			\$ 487,120

Expenses

Cash Expenses		Expense Adjustments		Beginning	Ending
Seeds, plants	52,800	Prepaid expenses		-	-
Fertilizer and lime	71,800			-	-
Chemicals	40,000				
Drying, fuel and electricity	12,000				
Freight, trucking	6,000				
Gasoline, fuel oil	14,620				
Repairs, maintenance	16,980				
Miscellaneous	20,280				
Interest Paid on operating note	3,015	Subtotal of Adjustments	g.	-	h. -
Crop Insurance	-				
Labor hired	4,800	i. Depreciation			110,000
Rent or lease payments	37,500	j. Gross Farm Expenses (f+g-h+i)			\$ 445,295
Debt service - Interest	36,000				
Health Insurance	7,500	k. Net Farm Income from Operations (e-j)			\$ 41,825
Utilities	6,000				
Real Estate Taxes (farm)	6,000	l. Sales of Farm Capital Assets			-
		m. Cost Value of Items Sold			-
		n. Capital Gains or Losses (l-m)			-
f. Total Cash Expenses	\$ 335,295	o. Net Farm Income (k+n)			\$ 41,825

Farm Name: **Shrub Farms** **Year:** **2002**

Statement of Cash Flows		
Cash Farm Income and Expenses (Operating)	Cash Inflows	Cash Outflows
Total Cash Income (Line a, Income Statement)	\$ 487,120	
Total Cash Expense (Line f, Income Statement)		\$ 335,295
Capital Assests (Investing)		
Sales of Capital Assests (Line l, Income Statement)	\$ -	
Cost of Purchases and Trades		\$ -
Loans (Financing)		
Principal Paid		\$ 44,000
RESIDUAL: Cash Inflow = New Loans Received	\$ -	
Nonfarm		
Nonfarm Income (wages, rents, interest, etc.)	\$ -	
Nonfarm Expenditures (family living, income tax, college expenses, etc.)		\$ 70,840
Cash on Hand (Farm and Nonfarm Cash, Checking, Savings)		
Beginning of Year (Current Assests: Balance Sheet)	\$ 100,000	
End of Year (Current Assests: Balance Sheet)		\$ 136,985
Total	\$ 587,120	\$ 587,120

Balance Sheet Statement	Beginning of Year		End of Year	
	Assets	Liabilities	Assets	Liabilities
Current	\$ 100,000	\$ 30,000	\$ 136,985	\$ 30,000
Intermediate	\$ 430,000	\$ 57,000	\$ 320,000	\$ 35,000
Long Term	\$ 1,000,000	\$ 340,000	\$ 1,000,000	\$ 318,000
TOTAL	\$ 1,530,000	\$ 427,000	\$ 1,456,985	\$ 383,000
e. Debt to Asset Ratio			0.28	0.26
f. Farm Net Worth, This Year	\$ 1,103,000		\$ 1,073,985	

Section 1: Estimate Expenses

Direct Expense - Corn

CALCULATORS

Seed	\$ 52,800	Seed	Total \$ 52,800	Cost/Unit \$ 88.00	Units/Acre 0.30	Plant Pop. 24,000	Kernals/Unit 80,000
Fertilizer	\$ 71,800	N	Total \$ 48,000	Cost/LB \$ 0.24	LBS/Acre 100		
		P2O5	\$ 7,800	\$ 0.13	30		
		K2O	\$ 10,400	\$ 0.13	40		
		Lime	\$ 5,600	\$ 0.01	400		
		TOTAL	\$ 71,800				
Chemicals	\$ 40,000	Bicep II Magnum	Total \$ 40,000	Cost/Unit \$ 10.00	Units/Acre 2.00	qt/acre	
			\$ -	\$ -	-		
			\$ -	\$ -	-		
		TOTAL	\$ 40,000				
Drying (Fuel & Elec. only)	\$ 12,000	Drying	\$ 12,000	\$ 0.06	\$/bushel		
Trucking	\$ 6,000	Trucking	\$ 6,000	\$ 0.03	\$/bushel		
Fuel, Oil, Grease	\$ 14,620						
Repairs	\$ 16,980						
Miscellaneous	\$ 20,280						
Interest	\$ 3,015	Interest	Total \$ 3,015	Rate 9%	Months 7	Operating Note \$ 234,480	
Crop Insurance	\$ -	Product	Cov. Level	Premium (see Step 4)	Insured Yld	Base Price	Harv. Price
		CAT			100	\$ 2.32	\$ 1.80
		APH					MPCI Price
		CRC					\$ 2.00
		TOTAL	\$ -	-			
Hired Labor	\$ 4,800	Hired Labor	Total \$ 4,800	Cost/Hours \$ 8.00	Hours Hired 600		
Land Rent	\$ 37,500	Land Rent	Total \$ 37,500	Cost/Acre \$ 25.00	% Acres Renter 75%	% Acres Owned 25%	
Int. Term Interest Paid	\$ 24,000						
Int. Term Principle Paid	\$ 22,000						
Long-Term Interest Paid	\$ 12,000						
Long-Term Principle Paid	\$ 22,000						

Total Direct Expense \$ 315,795

Overhead Expense

Depreciation	\$ 110,000						
Health Insurance	\$ 7,500						
Utilities	\$ 2,900						
Taxes - Land	\$ 6,000	Taxes - Land	Total \$ 6,000	Tax Rate 0.3%	\$/acre \$ 1,000.00	Total Value \$ 500,000	
Unpaid Labor and Mamt Charae	\$ 25,199	Unpaid Labor and Mamt	Total \$ 24,356	Gross Revenue \$ 487,120	% of Gross Revenue 5%		

Total Overhead Expenses \$ 151,599

Inventory Adjustment -

Total Beginning Inventory	\$ -	Beginning Inventory	Seed \$ -	Fertilizer \$ -	Chemical \$ -
Total Ending Inventory	\$ -	Ending Inventory	\$ -	\$ -	\$ -

Inventory Adjustment

Total Expenses \$ 467,394

Section 2: Estimate Revenues

Current Year - Corn

Acres	2,000
APH Yield (bu/acre)	100
Budget Yield (bu/acre)	100
Production (bushels)	200,000
Harvest Price (\$/bu)	\$ 1.80
Current Year Revenue	\$ 360,000

Inventory Adjustment - Corn (value)

Beginning Crop Inventory:	\$ -
Ending Crop Inventory:	\$ -
Inventory Adjustment	\$ -

Gov't Payments

Direct Payments:	\$ 33,320	Direct Payments	Total \$ 33,320	D.P. Rate \$ 0.28	D.P. Factor 85%	Base Acres 2,000	85 Base Yield 70
Counter Cyclical Payments:	\$ 57,800	Counter Cyclical	\$ 57,800	Target Price \$ 2.60	12 Mo. Avg. Price \$ 1.80	Base Acres 2,000	C.C. Yield 100
Market Loan	\$ 36,000	Market Loan	\$ 36,000	Loan Rate Posted \$ 1.98	County Price \$ 1.80		
Total Gov't Payments	\$ 127,120	TOTAL	\$ 127,120				

Crop Insurance Indemnity Pay. \$ -

Other Revenue (\$/bu) \$ -

Revenue \$ 487,120

Section 3: Estimate NonFarm Income and Expenses

Nonfarm Withdrawals		Off Farm Income	
Family Living Withdrawal	\$ 28,000	Wages (self & spouse)	\$ -
College Expense Withdrawal	\$ 35,000	Rents	\$ -
Income Tax	\$ 7,840	Interest, Investments, Etc.	\$ -
Total Nonfarm Withdrawals	\$ 70,840	Total Off Farm Income	\$ -

Section 4: Crop Insurance Premiums

Crop Insurance Premiums per Acre (Corn) Product	Coverage Level							
	50%	55%	60%	65%	70%	75%		
CAT	\$ -							
APH	\$ 1.77	\$ 2.31	\$ 2.81	\$ 3.96	\$ 5.18	\$ 7.71		
CRC	\$ 2.49	\$ 3.28	\$ 4.04	\$ 5.73	\$ 7.51	\$ 11.13		

Section 5: Provide Balance Sheet Information

Farm Balance Sheet Information

Intermediate Asset Purchases	\$ -	Long-Term Asset Purchases	\$ -
Intermediate Asset Sales	\$ -	Long-term Asset Sales	\$ -
Cost Basis of Int Assets Sold	\$ -	Cost Basis of Long-Term Assets Sold	\$ -

	Beginning of Year		End of Year	
	Assets	Liabilities	Assets	Liabilities
Current	\$ 100,000	\$ 30,000	\$ 136,985	\$ 30,000
Intermediate	\$ 430,000	\$ 57,000	\$ 320,000	\$ 35,000
Long Term Assets (see h58 for)	\$ 1,000,000	\$ 340,000	\$ 1,000,000	\$ 318,000

Farm Name: Shrub Farms		Year: 2002		
Crop Budget Worksheet		YIELD (bu/acre)		
ITEM	PRICE PER UNIT	50	100	125
RECEIPTS				
Corn	\$ 1.80 /bu	\$ 90.00	\$ 180.00	\$ 225.00
Government Payments		\$ 54.56	\$ 63.56	\$ 68.06
Crop Insurance Indemnity Payments		\$ -	\$ -	\$ -
Other Receipts		\$ -	\$ -	\$ -
TOTAL FARM RECEIPTS		\$ 144.56	\$ 243.56	\$ 293.06
	-All Farm	\$ 289,120	\$ 487,120	\$ 586,120
DIRECT COSTS				
Seed		\$ 26.40	\$ 26.40	\$ 26.40
Fertilizer		\$ 35.90	\$ 35.90	\$ 35.90
Chemicals		\$ 20.00	\$ 20.00	\$ 20.00
Drying - Fuel & Electric only	\$ 0.06 /bu	\$ 3.00	\$ 6.00	\$ 7.50
Trucking -	\$ 0.03 /bu	\$ 1.50	\$ 3.00	\$ 3.75
Fuel, Oil, Grease		\$ 7.31	\$ 7.31	\$ 7.31
Repairs		\$ 8.49	\$ 8.49	\$ 8.49
Miscellaneous		\$ 10.14	\$ 10.14	\$ 10.14
Int. on Oper. Cap.		\$ 1.51	\$ 1.51	\$ 1.51
Crop Insurance Premiums		\$ -	\$ -	\$ -
Hired Labor		\$ 2.40	\$ 2.40	\$ 2.40
Land Rent		\$ 18.75	\$ 18.75	\$ 18.75
Debt Service - Interest		\$ 18.00	\$ 18.00	\$ 18.00
TOTAL DIRECT COSTS	-Per Acre	\$ 153.40	\$ 157.90	\$ 160.15
	-Per Bushel	\$ 3.07	\$ 1.58	\$ 1.28
	-All Farm	\$ 306,795	\$ 315,795	\$ 320,295
OVERHEAD COSTS				
Mach. And Equip. Charge		\$ 55.00	\$ 55.00	\$ 55.00
Heath Insurance		\$ 3.75	\$ 3.75	\$ 3.75
Utilities		\$ 3.00	\$ 3.00	\$ 3.00
Real Estate Tax		\$ 3.00	\$ 3.00	\$ 3.00
Unpaid Labor and Management Charge		\$ 12.60	\$ 12.60	\$ 12.60
TOTAL OVERHEAD COSTS		\$ 77.35	\$ 77.35	\$ 77.35
	-All Farm	\$ 154,699	\$ 154,699	\$ 154,699
TOTAL COSTS	-Per Acre	\$ 230.75	\$ 235.25	\$ 237.50
	-Per Bushel	\$ 4.61	\$ 2.35	\$ 1.90
	-All Farm	\$ 461,494	\$ 470,494	\$ 474,994
RETURN ABOVE DIRECT COSTS		\$ (8.84)	\$ 85.66	\$ 132.91
RETURN ABOVE DIRECT COSTS & OVERHEAD (excl. labor & man.)		\$ (73.59)	\$ 20.91	\$ 68.16
RETURN TO EQUITY		\$ (86.19)	\$ 8.31	\$ 55.56
PLANNED PRINCIPLE PAYMENTS				
		\$ 22.00	\$ 22.00	\$ 22.00
TOTAL AFTER ALL COSTS AND PRINCIPLE PAYMENTS		\$ (108.19)	\$ (13.69)	\$ 33.56
TOTAL ACRES				2,000

Table 1. Production Information

10 Years of History	Yield	Prices
<i>High</i>	145	\$ 3.08
	143	\$ 2.84
	125	\$ 2.73
	125	\$ 2.70
	120	\$ 2.68
to	100	\$ 2.59
	99	\$ 2.57
	85	\$ 2.51
	76	\$ 2.46
	72	\$ 2.40
<i>Low</i>	43	\$ 2.32
Average	103	\$ 2.63

Table 2. Revenue Without Insurance

Price	\$ 1.80	\$ 2.00	\$ 2.20	\$ 2.40	\$ 2.60
Realized Yield					
0	\$ -	\$ -	\$ -	\$ -	\$ -
20	\$ 36	\$ 40	\$ 44	\$ 48	\$ 52
40	\$ 72	\$ 80	\$ 88	\$ 96	\$ 104
60	\$ 108	\$ 120	\$ 132	\$ 144	\$ 156
80	\$ 144	\$ 160	\$ 176	\$ 192	\$ 208
100	\$ 180	\$ 200	\$ 220	\$ 240	\$ 260
120	\$ 216	\$ 240	\$ 264	\$ 288	\$ 312
140	\$ 252	\$ 280	\$ 308	\$ 336	\$ 364

Table 3. APH Insurance Details

FCIC price (\$/Bu)		\$	2.00					
Yield			100					
Coverage Level	50%	50%	55%	60%	65%	70%	75%	
yield trigger	50	50	55	60	65	70	75	
Premium (\$/acre)	0	1.77	2.31	2.81	3.96	5.18	7.71	

Table 4. Yield Losses Under Alternative Yield/Coverage Scenarios -- APH

Coverage Level	50% CAT	50%	55%	60%	65%	70%	75%
Realized Yield (BPA)	Yield Loss -- BPA						
0	50	50	55	60	65	70	75
20	30	30	35	40	45	50	55
40	10	10	15	20	25	30	35
60	0	0	0	0	5	10	15
80	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0

Table 5. Indemnities Under Alternative Yield/Coverage Scenarios -- APH

Coverage Level	50% CAT	50%	55%	60%	65%	70%	75%
Realized Yield (BPA)	Indemnity (\$/Acre)						
0	55	100	110	120	130	140	150
20	33	60	70	80	90	100	110
40	11	20	30	40	50	60	70
60	0	0	0	0	10	20	30
80	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0

Table 6. Actual Revenue Under Alternative Scenarios and Market Prices -- APH

Including Cost of Insurance

Market Price		\$ 1.80						
Coverage Level	50% CAT	50%	55%	60%	65%	70%	75%	
Realized Yield (BPA)	Net Revenue (\$/Acre)							
0	55.00	98.23	107.69	117.19	126.04	134.82	142.29	
20	69.00	94.23	103.69	113.19	122.04	130.82	138.29	
40	83.00	90.23	99.69	109.19	118.04	126.82	134.29	
60	108.00	106.23	105.69	105.19	114.04	122.82	130.29	
80	144.00	142.23	141.69	141.19	140.04	138.82	136.29	
100	180.00	178.23	177.69	177.19	176.04	174.82	172.29	
120	216.00	214.23	213.69	213.19	212.04	210.82	208.29	
140	252.00	250.23	249.69	249.19	248.04	246.82	244.29	
Market Price		\$ 2.00						
Realized Yield (BPA)	Net Revenue (\$/Acre)							
0	55.00	98.23	107.69	117.19	126.04	134.82	142.29	
20	73.00	98.23	107.69	117.19	126.04	134.82	142.29	
40	91.00	98.23	107.69	117.19	126.04	134.82	142.29	
60	120.00	118.23	117.69	117.19	126.04	134.82	142.29	
80	160.00	158.23	157.69	157.19	156.04	154.82	152.29	
100	200.00	198.23	197.69	197.19	196.04	194.82	192.29	
120	240.00	238.23	237.69	237.19	236.04	234.82	232.29	
140	280.00	278.23	277.69	277.19	276.04	274.82	272.29	
Market Price		\$ 2.20						
Realized Yield (BPA)	Net Revenue (\$/Acre)							
0	55.00	98.23	107.69	117.19	126.04	134.82	142.29	
20	77.00	102.23	111.69	121.19	130.04	138.82	146.29	
40	99.00	106.23	115.69	125.19	134.04	142.82	150.29	
60	132.00	130.23	129.69	129.19	138.04	146.82	154.29	
80	176.00	174.23	173.69	173.19	172.04	170.82	168.29	
100	220.00	218.23	217.69	217.19	216.04	214.82	212.29	
120	264.00	262.23	261.69	261.19	260.04	258.82	256.29	
140	308.00	306.23	305.69	305.19	304.04	302.82	300.29	
Market Price		\$ 2.40						
Realized Yield (BPA)	Net Revenue (\$/Acre)							
0	55.00	98.23	107.69	117.19	126.04	134.82	142.29	
20	81.00	106.23	115.69	125.19	134.04	142.82	150.29	
40	107.00	114.23	123.69	133.19	142.04	150.82	158.29	
60	144.00	142.23	141.69	141.19	150.04	158.82	166.29	
80	192.00	190.23	189.69	189.19	188.04	186.82	184.29	
100	240.00	238.23	237.69	237.19	236.04	234.82	232.29	
120	288.00	286.23	285.69	285.19	284.04	282.82	280.29	
140	336.00	334.23	333.69	333.19	332.04	330.82	328.29	
Market Price		\$ 2.60						
Realized Yield (BPA)	Net Revenue (\$/Acre)							
0	55.00	98.23	107.69	117.19	126.04	134.82	142.29	
20	85.00	110.23	119.69	129.19	138.04	146.82	154.29	
40	115.00	122.23	131.69	141.19	150.04	158.82	166.29	
60	156.00	154.23	153.69	153.19	162.04	170.82	178.29	
80	208.00	206.23	205.69	205.19	204.04	202.82	200.29	
100	260.00	258.23	257.69	257.19	256.04	254.82	252.29	
120	312.00	310.23	309.69	309.19	308.04	306.82	304.29	
140	364.00	362.23	361.69	361.19	360.04	358.82	356.29	

Table 8. CRC Indemnities Under Various Scenarios

CRC HARVEST Price \$1.80		50%	55%	60%	65%	70%	75%
Coverage Level							
Realized Yield (BPA)	Indemnity (\$/Acre)						
0		116	127.6	139.2	150.8	162.4	174
20		80	91.6	103.2	114.8	126.4	138
40		44	55.6	67.2	78.8	90.4	102
60		8	19.6	31.2	42.8	54.4	66
80		0	0	0	6.8	18.4	30
100		0	0	0	0	0	0
120		0	0	0	0	0	0
140		0	0	0	0	0	0
CRC HARVEST Price \$2.00							
Realized Yield (BPA)	Indemnity (\$/Acre)						
0		116	127.6	139.2	150.8	162.4	174
20		76	87.6	99.2	110.8	122.4	134
40		36	47.6	59.2	70.8	82.4	94
60		0	7.6	19.2	30.8	42.4	54
80		0	0	0	0	2.4	14
100		0	0	0	0	0	0
120		0	0	0	0	0	0
140		0	0	0	0	0	0
CRC HARVEST Price \$2.20							
Realized Yield (BPA)	Indemnity (\$/Acre)						
0		116	127.6	139.2	150.8	162.4	174
20		72	83.6	95.2	106.8	118.4	130
40		28	39.6	51.2	62.8	74.4	86
60		0	0	7.2	18.8	30.4	42
80		0	0	0	0	0	0
100		0	0	0	0	0	0
120		0	0	0	0	0	0
140		0	0	0	0	0	0
CRC HARVEST Price \$2.40							
Realized Yield (BPA)	Indemnity (\$/Acre)						
0		120	132	144	156	168	180
20		72	84	96	108	120	132
40		24	36	48	60	72	84
60		0	0	0	12	24	36
80		0	0	0	0	0	0
100		0	0	0	0	0	0
120		0	0	0	0	0	0
140		0	0	0	0	0	0
CRC HARVEST Price \$2.60							
Realized Yield (BPA)	Indemnity (\$/Acre)						
0		130	143	156	169	182	195
20		78	91	104	117	130	143
40		26	39	52	65	78	91
60		0	0	0	13	26	39
80		0	0	0	0	0	0
100		0	0	0	0	0	0
120		0	0	0	0	0	0
140		0	0	0	0	0	0

CRC indemnity for a particular coverage level is calculated as the greater of zero and the difference between the revenue trigger and the realized yield multiplied by the CRC harvest price.

For instance, with a \$2.40 harvest price, 60% coverage, and a 40 bpa yield, the indemnity is

$\max(144 - 40 \cdot 2.4, 0) = 48$ where the revenue trigger was $144 = \max(2.40, 2.32) \cdot 100 \cdot 0.60$

Table 9. Actual Revenue Under Various Scenarios -- CRC

Including Cost of Insurance

Local Price	\$ 1.80					
Coverage Level	50%	55%	60%	65%	70%	75%
Realized Yield (BPA)	Net Revenue (\$/acre)					
0	113.51	124.32	135.16	145.07	154.89	162.87
20	113.51	124.32	135.16	145.07	154.89	162.87
40	113.51	124.32	135.16	145.07	154.89	162.87
60	113.51	124.32	135.16	145.07	154.89	162.87
80	141.51	140.72	139.96	145.07	154.89	162.87
100	177.51	176.72	175.96	174.27	172.49	168.87
120	213.51	212.72	211.96	210.27	208.49	204.87
140	249.51	248.72	247.96	246.27	244.49	240.87
Local Price	\$ 2.00					
Realized Yield (BPA)	Net Revenue (\$/acre)					
0	113.51	124.32	135.16	145.07	154.89	162.87
20	113.51	124.32	135.16	145.07	154.89	162.87
40	113.51	124.32	135.16	145.07	154.89	162.87
60	117.51	124.32	135.16	145.07	154.89	162.87
80	157.51	156.72	155.96	154.27	154.89	162.87
100	197.51	196.72	195.96	194.27	192.49	188.87
120	237.51	236.72	235.96	234.27	232.49	228.87
140	277.51	276.72	275.96	274.27	272.49	268.87
Local Price	\$ 2.20					
Realized Yield (BPA)	Net Revenue (\$/acre)					
0	113.51	124.32	135.16	145.07	154.89	162.87
20	113.51	124.32	135.16	145.07	154.89	162.87
40	113.51	124.32	135.16	145.07	154.89	162.87
60	129.51	128.72	135.16	145.07	154.89	162.87
80	173.51	172.72	171.96	170.27	168.49	164.87
100	217.51	216.72	215.96	214.27	212.49	208.87
120	261.51	260.72	259.96	258.27	256.49	252.87
140	305.51	304.72	303.96	302.27	300.49	296.87
Local Price	\$ 2.40					
Realized Yield (BPA)	Net Revenue (\$/acre)					
0	117.51	128.72	139.96	150.27	160.49	168.87
20	117.51	128.72	139.96	150.27	160.49	168.87
40	117.51	128.72	139.96	150.27	160.49	168.87
60	141.51	140.72	139.96	150.27	160.49	168.87
80	189.51	188.72	187.96	186.27	184.49	180.87
100	237.51	236.72	235.96	234.27	232.49	228.87
120	285.51	284.72	283.96	282.27	280.49	276.87
140	333.51	332.72	331.96	330.27	328.49	324.87
Local Price	\$ 2.60					
Realized Yield (BPA)	Net Revenue (\$/acre)					
0	127.51	139.72	151.96	163.27	174.49	183.87
20	127.51	139.72	151.96	163.27	174.49	183.87
40	127.51	139.72	151.96	163.27	174.49	183.87
60	153.51	152.72	151.96	163.27	174.49	183.87
80	205.51	204.72	203.96	202.27	200.49	196.87
100	257.51	256.72	255.96	254.27	252.49	248.87
120	309.51	308.72	307.96	306.27	304.49	300.87
140	361.51	360.72	359.96	358.27	356.49	352.87

Table 7. CRC Insurance Details

CRC price	\$ 2.32	assumes no basis				
Yield	100	all sold at CRC harvest price				
Basis	\$ -					
Coverage Level	50%	55%	60%	65%	70%	75%
Premium (\$/acre)	\$ 2.49	\$ 3.28	\$ 4.04	\$ 5.73	\$ 7.51	\$ 11.13
CRC Harvest Price	Revenue Trigger (\$/Acre)					
\$1.80	116	127.6	139.2	150.8	162.4	174
\$2.00	116	127.6	139.2	150.8	162.4	174
\$2.20	116	127.6	139.2	150.8	162.4	174
\$2.40	120	132	144	156	168	180
\$2.60	130	143	156	169	182	195

Revenue Trigger is determined by multiplying the greater of the CRC price and CRC harvest price by the product of the CRC yield and coverage level. For instance at a 1.80 CRC harvest price the yield trigger is $\$2.32 \times 100 \times 0.50 = 116$