

Appendix C: Tableau of Mathematical Optimization Model

Units	Obj Cj's	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres
		-5000	-5100	-6222	-8260	-6500	-7000	-4000	-4000	-5500	
	Activities	Grow Pepper	Grow Pepper - IPM	Grow corn	Grow Pumpkin	Grow Sweet	Grow Sweet - IPM	Grow Callaloo	Grow Callaloo	Grow Callaloo - IPM	
	Solution	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Acres	Land	1	1	1	1	1	1	1	1	1	
\$JM	Credit	-5000	-5100	-6222	-8260	-6500	-7000	-4000	-4000	-5500	
\$JM	Sub Credit Limit										
Hours/Year	Water	416	416	520	520	312	364	208	208	208	
Max Hours/W k	Pump Water										
Max Hours/W k	NIC Water										
50 Kg bag	Fert - Pepper	1	1								
Bottle	Insect - Pepper	2	0.5								
Bottle	Herb - Pepper	0.5	0.5								
50 Kg bag	Fert - Corn			1							
Bottle	Insect - Corn			1							
Bottle	Herb - Corn			1							
50 Kg bag	Fert - Pump				1						
Bottle	Insect - Pump				1						
Bottle	Herb - Pump				1						
Bottle	Fung-pump				1						
50 Kg bag	Fert-Sweet					1	1				
Bottle	Herb-Sweet					1	1				
50 Kg bag	Fert - Callaloo							1	1	1	
Bottle	Insect - Callaloo							1	1	0.5	
Bottle	Fung - Callaloo							1	1	1	
50 Kg bag	Fert - Cassava										
Bottle	Insect - Cassava										
Bottle	Herb - Cassava										
50 Kg bag	Fert - Sugar										
Bottle	Herb - Sugar										
Man-Days	May Labor	0	1.25	3.9	7.35	0	0	3.25	0	0	
Man-Days	June Labor	1.5	1.25	5.5	9.25	0	0	2.5	0	0	
Man-Days	July Labor	1	0.75	7.4	8.2	9	9	7.25	0	0	
Man-Days	August Labor	9	9	4	4.175	5	5	7.5	0	0	
Man-Days	September	2.5	2.5	2	4.175	0	0.5	5.5	3.25	4.25	
Man-Days	October Labor	6.5	6.5	0	0	0	0.5	3.5	2.5	3	
Man-Days	November Labor	3.5	4.5	0	0	2	3.5	0	7.25	6.75	
Man-Days	December Labor	10.5	14.5	0	0	2	3.5	0	7.5	7	
Man-Days	January Labor	5.5	8.5	0	0	2	0	0	5.5	5.5	
Man-Days	February Labor	4.5	6.5	0	0	2	0	0	3.5	4.25	
Man-Days	March Labor	1	3	0	0	0	0	0	0	0	
Man-Days	April Labor	0	3	4.9	8.4	0	0	0	0	0	
Pounds	Harvest -Pepper	10000	13000								
Pounds	Harvest - Corn			3000							
Pounds	Harvest Pump				7000						
Pounds	Harvest-Sweet					2600	3380				
Pounds	Harvest-Callaloo							8750			
Pounds	Harvet-Cal. W inter								8750	11375	
Pounds	Harvest - Cassava										
Shorts tons	Harvest - Sugar										
IPM Rotation	Hot/Corn		-0.14	1							
Max acres	Hot Pepper	1	1								
Max acres	Corn			1							
Max acres	Pumpkin				1						
Max acres	Sweet Potato					1	1				
Max Acre	Callaloo							1	1	1	
Max acres	Casava										
Max acres	Sugar										
PC Yield Increase	Harvest -Pepper	0	0								
PC Yield Increase	Harvest Pump				0						
PC Yield Increase	Harvest-Sweet					0	0				
PC Yield Increase	Harvest-Callaloo							0			
PC Yield Increase	Harvet-Cal. W inter								0	0	
PC Yield Increase	Harvest - Cassava										

a. The credit requirements reflect the costs omitted from the matrix coefficients such as purchasing seeds, land preparation and other operating costs.

b. Water requirement coefficients reflect the optimal supplemental water for each crop as obtained from farmer interviews and (Lawrence, 1998b) (Martin, 1998) (Clark-Harris, 1998).

