## APPENDIX: PROGRAM LISTING

		AGRICULTURE SECTOR WITH EXOGENOUS INPUTS
	NOTE NOTE	LOOP 1: POOD FROM INVESTMENT IN LAND DEVELOPMENT
34	A	LPC.K=AL.K/PALT
	C	PALT=3.2E9
85	L	AL.K=AL.J+(DT)(LDR.JK-LER.JK-LRUI.JK)
	14	AL=.9E9
86	C L	PAL.K=PAL.J+(DT)(-LDR.JK)
86	N	PAL=PALI
	č	PALI=2.3E9
87	A	F.K=LY.K*AL.K*LFH*(1-PL)
	C	LPH=.7
	C	PL=.1
88	A	FPC.K=P.K/POP.K IFPC.K=CLIP(IFPC2.K,IFPC1.K,TIME.K,PYEAR)
39 90	A	IPPC1.K=TABHL(IPPC1T,IOPC.K,0,1600,200)
90	T	IFPC1T=230/480/690/850/970/1070/1150/1210/1250
91	A	IFPC2.K=TABBL(IFPC2T, IOPC, K, 0, 1600, 200)
	7	IPPC2T=230/480/690/850/970/1070/1150/1210/1250
92	A	TAL.K=IO.K*FIOAA.K
93	A	FIGAALK=CLIP(FIGAA2.K,FIGAA1.K,TIME.K,PYEAR) FIGAALK=TABLL(FIGAA1T,FPC.K/IPPC.K,0,2.5,.5)
94	A	FIOAAIT=, 4/, 2/, 1/, 025/0/0
95	A	PIOAA2,K=TABHL(PIOAA2T,FPC,K/IFPC,K,0,2.5,.5)
	Ŧ	FIOAA2T=,4/,2/,1/,025/0/0
96	R	LDR.KL=TAI.K*PIALD.K/DCPH.K
97	A	DCPH.K-TABHL (DCPHT, PAL.K/PALT, 0, 1, . 1)
	T	DCPHT=1E5/7400/5200/3500/2400/1500/750/300/150/75/50
	NOTE NOTE	LOOP 2: FOOD PRO'S INVESTMENT IN AGRICULTURAL INPUTS
98	A	CAI.K=TAI.K*(1-FIALD.K)
99	A	AI.K=SMOOTH(CAI.K,ALAI.K)
	N	AI=5E9
100	A	ALAI.K+CLIP(ALAI2, ALAI1, TIME, K, PYEAR)
	C	ALAI 1=2 ALAI 2=2
101	A	AIPH.K=AI.K*(1-FALM.K)/AL.K
102	A	LYMC.KSTABUL(LYMCT.AIPH.K.O.1000.40)
	7	LYMCT=1/3/3.8/4.4/4.9/5.4/5.7/6/6.3/6.6/6.9/7.2/7.4
	X.	/7.6/7.8/8/8.2/8.4/8.6/8.8/9/9.2/9.4/9.6/9.8/10
103	A	LY.K=LYF.K*LFERT.K*LYMC.K*LYMAP.K LYP.K=CLIP(LYF2,LYF1,TIME.K,PYEAR)
104	A C	LYF1=1
	c	LYP2=1
105	A	LYMAP.K=CLIP(LYMAP2.K,LYMAP1.K,TIME.K,PYEAR)
106	A	LYMAP1.K=TABGL(LYMAP1T,10.K/1070,0,30,10)
	T	LYMAP17=1/1/.7/.4
107	A	LYMAP 2.K=TABHL (LYMAP 2T, IO.K/IO70,0,30,10) LYMAP 2T=1/1/.7/.4
	C	1070=7.9E11
	STOR	
	HOTE	LOOPS 1 & 2: THE INVESTMENT ALLOCATION DECISION
	MOTE	Market Market (Market and Company of Company
100	A	PIALD:K=TABLE(FIALDE,(HPLD:K/HPAI.E),0,2,.25) PIALDT=0/.05/.15/.30/.50/.70/.85/.95/1
109	A	PLD.K=LY.K/(DCPH.K*SD)
***	C	SD=.07
110	A	MPAL.K=ALAL.K*LY.K*MLYMC.K/LYMC.K
	Α	MLYMC.K=TABIL(MLYMCT,AIPH,K,0,600,40)
111	T	MLYMCT=.075/.03/.015/.011/.009/.008/.007/.006/
	X	.005/.005/.005/.005/.005/.005/.005/.005
	HOTE	LOOP 3: LAND EROSION AND URBAN-INDUSTRIAL USE
	NOTE	INOL 31 THAN PROFESS WAS ASSESSED ASE
112	A	ALL, K=ALL4*LLMY, K
270		

	A A A A A A A A A A A A A A A A A A A	ALLIN-6000 LOWER, SCHEFF (LIME 2.K, LLOW 1.8, TYTUM, K, PYTEAR) LOWER, SCHEFF (LIME 2.K, LLOW 1.8, TYTUM, K, PYTEAR) LOWER, LOWER (LIME 2.K, LAVIET, 0.9, 1.) LOWER 2.K, PARKEL LOWER 2.K, K, LAVIET, 0.9, 1.) LOWER 2.K, PARKEL LOWER 2.K, K, LAVIET, 0.9, 0.1) LOWER 2.K, PARKEL LOWER 2.K, K, LAVIET, 0.9, 0.1) LOWER 2.K, PARKEL LUCKTO, LOVE, 0.9, 1.00, 2.00) ULDECT, 305/.009/.015/.015/.007/.005/.017/.00/.00 ULDECT, 305/.009/.015/.015/.016/.005/.017/.00/.00 ULDECT, 305/.009/.015/.015/.016/.005/.017/.00/.00 ULDECT, 305/.009/.015/.015/.016/.005/.017/.00/.00 ULDECT, 305/.009/.015/.015/.016/.005/.017/.00/.00 ULDECT, 305/.009/.015/.005/.016/.005/.017/.00/.00 ULDECT, 305/.009/.015/.005/.005/.005/.005/.005/.005/.005
A A A A A A A A A A A A A A A A A A A	A A A A A A A A A A A A A A A A A A A	LLMC. RECLEP (LLMC 2.K. LLCH 1.6. 71 W. K. PURLM) LLMC 1. RECLEP (LLMC 2.K. LLCH 1.6. 71 W. K. PURLM) LLMC 2. RECLEP (LLMC 2.K. LLC) LLMC 2. RETABLE (LLMC 2.K. LLC) LLMC 3. RETABLE (LLMC 2.K. LLC) LLMC 3. RETABLE (LLC) LLMC 3. R
	R C C C C C C C C C C C C C C C C C C C	LLOYI, KATARAK (LEPYIY, II. K/IE*, 0.9.1) LOYI, KATARAK (LEPYIY, II. K/IE*, 0.9.1) LOYIV, II. KATARAK (LEPYIY, II. K/IE*, 0.9.1) LOYIV, II. KATARAK (LEPYIY, II. K/IE*, 0.9.1) LOYIV, II. KATARAK (LEPYIY, 1.0.1) LOYIV, II. KATARAK (LEPYIY, 1.0.1) LOYIV, II. KATARAK (LEPYIY, 1.0.1) LOYIV, III. LO
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	R R C C C C C C C C C C C C C C C C C C	LEMP IN-1, 2/1/, 6/1/, 30/, 18/, 05/3/, 64/, 03/5/, 61/, 61 LEMP IN-1, 2/1/, 6/1//, 6/1///, 6/1///, 6/1///, 6/1///, 6/1///, 6/1///, 6/1///, 6/1////, 6/1/////, 6/1//////////
	R R C HOTE HOTE HOTE L	LEP, ALFOND, A.VALLE, DEPT., 1909, 2, 2, 1909, 290)  ULBLE, ROBERT, ST., 1909, 2, 2, 2007, 2, 200, 2, 200  ULBLE, ROBERT, RODER, C. 1909, 2, 2007, 200
**************************************	R R C HOTE HOTE HOTE L	LEP, ALFOND, A.VALLE, DEPT., 1909, 2, 2, 1909, 290)  ULBLE, ROBERT, ST., 1909, 2, 2, 2007, 2, 200, 2, 200  ULBLE, ROBERT, RODER, C. 1909, 2, 2007, 200
2	R R C HOTE HOTE HOTE L	LEP, ALFOND, A.VALLE, DEPT., 1909, 2, 2, 1909, 290)  ULBLE, ROBERT, ST., 1909, 2, 2, 2007, 2, 200, 2, 200  ULBLE, ROBERT, RODER, C. 1909, 2, 2007, 200
A B C L L L L L L L L L L L L L L L L L L	A R C C C C C C C C C C C C C C C C C C	ULDEC. #PARKETURECT_TOTO_K_0_1000_200] ULDECCT_005/_009/_005/_005/_005/_007/_00/_009 ULDECCT_005/_009/_005/_005/_005/_007/_00/_009 ULDECCT_005/_005/_005/_005/_005/_005/_009 ULDECCT_005/_005/_005/_005/_005/_005/_005/_005
2	R R C HOTE HOTE WOTE	ULBCC-, 30%, 30%, 30%, 30%, 40%, 30%, 40%, 30%, 40%, 40% ULBC-, 40%, 40%, 40%, 40%, 40%, 40%, 40%, 40%
	R R C HOTE HOTE WOTE	ULBCC-, 30%, 30%, 30%, 30%, 40%, 30%, 40%, 30%, 40%, 40% ULBC-, 40%, 40%, 40%, 40%, 40%, 40%, 40%, 40%
	R C L C HOTE HOTE HOTE HOTE	LEMI.K.=MAX.(0, (ULIR.K.=ULI.K.)/ULIDT) ULIDT= 40 ULIDT= 40 ULI=011.0 ULI-01.10 ULI-01.10 ULI-01.10 ULI-01.10
	R C L C HOTE HOTE HOTE HOTE	LEMI.K.=MAX.(0, (ULIR.K.=ULI.K.)/ULIDT) ULIDT= 40 ULIDT= 40 ULI=011.0 ULI-01.10 ULI-01.10 ULI-01.10 ULI-01.10
C 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	L C C C C C C C C C C C C C C C C C C C	ULLDY-UL ULL, R-UL, J+ (DT) (LBUI, Js) ULL-ULL ULL-ULL-ULL LOOP 4: LAND PURTILITY DEGRADATION
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	O TE NOTE L	ULL.4-OIL.3+(DT) (LRUI.3A) ULL-8.2E6 LOOP 4: LAND FURTILITY DETRADATION
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	OFF HOTE HOTE HOTE L	ULL-01LT ULLI-8.266 LOOP 4: LAND PERTILITY DEGRADATION
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	OTE HOTE HOTE HOTE L	UILI=8.226 LOOP 4: LAND PERTILITY DEGRADATION
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	HOTE HOTE HOTE L	LOOP 4: LAND PERTILITY DEGRADATION
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	HOTE NOTE L	
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	NOTE L C A	
8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	ii C	LEGRE WALFERS IN (DV) (LEG IN-LEG IN)
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	C A	
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	C. A.	
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	A	LFERT=LFERTI
3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	A.	LFERTI=G00
3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		LFDR.K=TABil(LFDRT,PPOLX.K,0,30,10)
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		LPDRT=0/.1/.3/.5
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	R	LPD.KL=LPERT.K*LFDR.K
2000	NOTE	Partie and the partie of the parties
200		LOOP 5: LAND FERTILITY REGENERATION
3	NOTE	TWOL 21 PULD LEGITATES DE PRINCIPALITAIN
		LFR.KL=(ILF-LFERT.K)/LFRT.K
		ILF=600
	N.	LFRT.K=TABHL (LFRTT, FALM.K, 0, . 10, . 02)
	T	LFRTT=20/13/8/4/2/2
	NOTE	
	NOTE	LOOP 6: DISCONTINUING LAND MAINTENANCE
	NOTE	
	ħ.	FALM.K=TABHL(FALMT,PFR.K,0,4,1)
	-	FALMT=0/.04/.07/.09/.1
	A	FR.K=FPC.K/SFPC
		SPPC=230
	A	PFR, K=SMOOTH (FR, K, FSPD)
		PFR=1
		F3PD=2
		F3F0=4
	NOTE	TOTAL TO THE PART OF THE PART
	NOTE	EXOGENOUS INPUTS TO THE ACRICULTURE SECTOR
	NOTE	THE RESERVE THE PROPERTY AND A 14 APRIL MADE
	NOTE	POPULATION GROWS EXPONENTIALLY AT 1.2% PER YEAR
	NOTE	
	A	POP.K=CLIP(POP2.K,POP1.K,TINE,K,EYEAR)
	C	EYEAR*2500
	A	POP1.K-POPI*EXP(.012*(TIME.K-1900))
	A	POP2.K=POPI*EXP(.012*(EYEAR-1900))
	C	POPI=1.65E9
	NOTE	
	NOTE	INDUSTRIAL OUTPUT GROWS EXPONENTIALLY AT 3.6% PER YEAR
	NOTE	ANDURANE CONTOR
	A	IO.K-CLIP(IO2.K, IO1.K, TIME.K, EYEAR)
		IO1.K=IOI*EXP(.036*(TIME.K-1900))
	A	IO1.K=IO1*EXP(.036*(III:E.A-1900))
	A	TOS 'VaTOT - PW. ( 'n 30 - IP PRUS - * 5401)
	C	IOI=.67E11
	A	IOPC.K=IO.K/POP.K
- 1	NOTE	THE PARTY OF THE P
	NOTE	PERSISTENT POLLUTION GROWS EXPONENTIALLY AT 3% PER YEAR
	NOTE	
	A	PPOLX.K=CLIP (PPOLX2.K, PPOLX1.K, TIME.K, EYEAR)
	A	PPOLX1.K=PPOLXI*EXP(.03*(TIME.K-1900))
	λ	PPOLX2.K=PPOLXI*EXP(.03*(EYEAR-1900))
	C	PPOLXI=, 12
	NOTE	PPODAL - 1 Te
	NOTE	CONTROL CARDS
	NOTE	GOLLION STATE
		esman-10.25
	C	PYEAR=1975
	19	TI:E=TI:EN
	C	TIMEN=1900
		DT=.25/LENGTH=2100/PLTPER=5/PRTPER=0
	SPEC	P=8(0.12E12)/PPC=P(0,1000)/Li=1(0,0E3)/
	SPEC	
		LPERT-IO,0001/AIPH-010,10001
	PLOT	LFERT=T(0,600) /AIPH=S(0,1000) AL=L,PAL=P(0,4E9) /LER=E,LDR=D,
	PLOT	
	PLOT	LFERT="(0,500)/AIPH=>(0,1000) AL=1,PAL=P(0,489)/LER=E_LDE=D, LRUI=U(0,4E7)/DCPH=\$(0,1E4) STANDARD