

Appendix G
CORRELATION COEFFICIENTS, REGRESSION
RESULTS, AND VARIABLE DEFINITIONS

Pacific			
	Change Production Expenses 1980-1985	Change Production Expenses 1986-1997	CRP Enrollment 1997
Change Production Expenses 1980-1985	1		
Change Production Expenses 1986-1997	-0.146767733	1	
CRP Enrollment 1997	-0.018262507	-0.104317185	1
Mountain			
	Change Production Expenses 1980-1985	Change Production Expenses 1986-1997	CRP Enrollment 1997
Change Production Expenses 1980-1985	1		
Change Production Expenses 1986-1997	-0.218285108	1	
CRP Enrollment 1997	-0.228620937	-0.106095732	1
Corn Belt			
	Change Production Expenses 1980-1985	Change Production Expenses 1986-1997	CRP Enrollment 1997
Change Production Expenses 1980-1985	1		
Change Production Expenses 1986-1997	-0.062978881	1	
CRP Enrollment 1997	-0.252751207	-0.04831722	1

Southern Plains			
	Change Production Expenses 1980-1985	Change Production Expenses 1986-1997	CRP Enrollment 1997
Change Production Expenses 1980-1985	1		
Change Production Expenses 1986-1997	-0.046066668	1	
CRP Enrollment 1997	-0.07978528	-0.01362906	1
Northern Plains			
	Change Production Expenses 1980-1985	Change Production Expenses 1986-1997	CRP Enrollment 1997
Change Production Expenses 1980-1985	1		
Change Production Expenses 1986-1997	0.027034712	1	
CRP Enrollment 1997	0.197391137	0.011391113	1
Southeast			
	Change Production Expenses 1980-1985	Change Production Expenses 1986-1997	CRP Enrollment 1997
Change Production Expenses 1980-1985	1		
Change Production Expenses 1986-1997	0.155119437	1	
CRP Enrollment 1997	-0.094635311	-0.114757881	1

Lake States			
	Change Production Expenses 1980-1985	Change Production Expenses 1986-1997	CRP Enrollment 1997
Change Production Expenses 1980-1985	1		
Change Production Expenses 1986-1997	0.0951459	1	
CRP Enrollment 1997	0.033320953	-0.049495092	1

Table G-1. Description of Variables Used in the Equations

AGEMPLOY	Total farm employment + total employment in the agricultural services, forestry, fishing and other
AVAILLAND	Total cropland acres - diverted acres - CRP acres (TCROPA-DIVERTAC-FSACRPA)
BEAEXP	Crop production expenditures (dollars) = seed expense + fertilizer expense + petroleum expense + hired labor expense
CASHRENT	Average cash rent per acre, by state, non-irrigated land
DR1	Region 1
DR2	Region 2
DR3	Region 3
DR4	Region 4
DR5	Region 5
DR6	Region 6
DR7	Region 7
DR8	Region 8
DR9	Region 9
DT2	Dummy variable for 1987
DT3	Dummy variable for 1992
DT4	Dummy variable for 1997
FCRCHA	5 year change in CRP enrolled acreage, using FSA data
FSACRPA	CRP acreage enrolled, by state
FSARENTD	Average CRP rent per acre, by state, in dollars
HELP	Highly erodible land as percentage of total cropland
IRRPA	Irrigated acreage as a percent of total cropland acreage
MCROPA	Acres planted to major crops: corn acres + sorghum acres + wheat acres + barley acres + oat acres + soybean acres + cotton acres + rice aced
MVCROPD	Market value of agricultural products sold Crops, including nursery and greenhouse crops (\$1,000)
NHAVCP	Non Harvested Cropland, measured as percentage of total cropland
PCROP	Percent of total cropland in major crops
REV1	Market value of crops, in dollars, per acre of major crops
REV2	Gross cash receipts per acre planted to major crops (includes government payments)
REV3	Cash receipts per acre planted to major crops (excludes government payments)
SOILI	Soil index

TABLE G-2. Agricultural Employment Regression Results

N = 192

R-SQUARE = 0.9275

VARIANCE OF THE ESTIMATE-SIGMA**2 = 0.68938E+09

STANDARD ERROR OF THE ESTIMATE-SIGMA = 26256

DEPENDENT VARIABLE = AGEMPLOY

Variable Name	Estimated Coefficient (Standard Error)	Significance
BEAEXP	0.94904E-04 (0.2846E-05)	***
FCRPCHA	0.90629E-02 (0.6040E-02)	
DT2	-2641.8 (5700)	
DT3	-18749 (5859)	***
DT4	11071 (5397)	**
DR1	3465.7 (0.1054E+05)	
DR2	-20190 (6217)	***
DR3	65038 (0.1134E+05)	***
DR4	-48985 (8548)	***
DR5	-26390 (8135)	***
DR6	-11026 (9115)	
DR7	13192 (7875)	*
DR8	-17601 (8685)	**
DR9	37488 (7136)	***
CONSTANT	31238 (5255)	***

Note:

* Significant at the 10% level

** Significant at the 5% level

*** Significant at the 1% level

TABLE G-3A Major Cropland Acres/Cropland Supply Regression Results

N = 184

R-SQUARE = 0.9455

R-SQUARE ADJUSTED = 0.9400

VARIANCE OF THE ESTIMATE-SIGMA**2 = 0.19301E+13

STANDARD ERROR OF THE ESTIMATE-SIGMA = 0.13893E+07

DEPENDENT VARIABLE = MCROPA

Variable Name	Estimated Coefficient (Standard Error)	Significance
FSARENTD	980.95 (452.6)	**
SOILI	-6755.7 (0.1185E+05)	
NHAVCP	-81489 (0.2163E+05)	***
MCROPD	-93.111 (113.5)	
AVAILAND	0.60514 (0.3515E-01)	***
DT2	0.39940E+06 (0.3312E+06)	
DT3	0.39809E+06 (0.3205E+06)	
DT4	0.17312E+06 (0.3149E+06)	
DR1	-0.73740E+06 (0.6100E+06)	
DR2	0.89442E+06 (0.4557E+06)	*
DR3	-0.15419E+07 (0.9225E+06)	*
DR4	0.59439E+06 (0.7074E+06)	
DR5	0.35449E+07 (0.6928E+06)	***
DR6	-1761.7 (0.5967E+06)	
DR7	0.10831E+07 (0.4489E+06)	**
DR8	0.16294E+07 (0.2938E+06)	***
DR9	0.10591E+07 (0.4728E+06)	**
CONSTANT	0.13477E+07 (0.8165E+06)	

Note:

* Significant at the 10% level

** Significant at the 5% level

*** Significant at the 1% level

TABLE G-3B Major Cropland Acres/Cropland Supply Regression Results

N = 184

R-SQUARE = 0.9394

R-SQUARE ADJUSTED = 0.9332

VARIANCE OF THE ESTIMATE-SIGMA**2 = 0.21475E+13

STANDARD ERROR OF THE ESTIMATE-SIGMA = 0.14654E+07

DEPENDENT VARIABLE = MCROPA

Variable Name	Estimated Coefficient (Standard Error)	Significance
FSACRPA	-0.14245 (0.2566)	
SOILI	21833 (0.1209E+05)	*
HELP	-13769 (7521)	*
MCROPD	20.937 (116.8)	
AVAILAND	0.58849 (0.3858E-01)	***
DT2	-0.24527E+06 (0.2720E+06)	
DT3	29865 (0.2913E+06)	
DT4	0.14056E+06 (0.3133E+06)	
DR1	-0.14829E+07 (0.4908E+06)	***
DR2	0.40801E+06 (0.4308E+06)	
DR3	-0.30884E+07 (0.9343E+06)	***
DR4	-86811 (0.8271E+06)	
DR5	0.32599E+07 (0.8382E+06)	***
DR6	-29155 (0.6416E+06)	
DR7	-0.79384E+06 (0.2877E+06)	***
DR8	0.45614E+06 (0.3749E+06)	
DR9	-0.41671E+06 (0.2743E+06)	
CONSTANT	-0.10842E+07 (0.7307E+06)	

Note:

* Significant at the 10% level

** Significant at the 5% level

*** Significant at the 1% level

TABLE G-4A Cash Rent Regression Results

N = 142

R-SQUARE = 0.7713

R-SQUARE ADJUSTED = 0.7399

VARIANCE OF THE ESTIMATE-SIGMA**2 = 128.30

STANDARD ERROR OF THE ESTIMATE-SIGMA = 11.327

DEPENDENT VARIABLE = CASHRENT

Variable Name	Estimated Coefficient (Standard Error)	Significance
FCRCHA	-0.27798E-05 (0.1635E-05)	*
REV1	0.11104E-02 (0.8488E-03)	
NHAVCP	-0.30884E-01 (0.1485)	
PCROP	0.34755 (0.4241E-01)	***
IRRIPA	0.40777 (0.1131)	***
DT2	-2.1049 (2.810)	
DT3	-2.9020 (2.801)	
DT4	-7.4457 (2.598)	***
DR1	6.7005 (5.417)	
DR2	-24.985 (6.460)	***
DR3	-16.544 (4.948)	***
DR4	-9.9893 (2.819)	***
DR5	33.286 (4.073)	***
DR6	10.277 (2.240)	***
DR7	-10.079 (5.282)	*
DR8	-9.5019 (3.067)	***
DR9	6.5980 (4.709)	
CONSTANT	28.794 (3.629)	***

Note:

* Significant at the 10% level

** Significant at the 5% level

*** Significant at the 1% level

TABLE G-4B Cash Rent Regression Results

N = 142

R-SQUARE = 0.7810

R-SQUARE ADJUSTED = 0.7509

VARIANCE OF THE ESTIMATE-SIGMA**2 = 122.87

STANDARD ERROR OF THE ESTIMATE-SIGMA = 11.085

DEPENDENT VARIABLE = CASHRENT

Variable Name	Estimated Coefficient (Standard Error)	Significance
FCRPCA	-0.29326E-05 (0.1696E-05)	*
REV3	0.12538E-02 (0.7077E-03)	*
NHAVCP	-0.19676E-01 (0.1462)	
PCROP	0.36985 (0.3826E-01)	***
IRRIPA	0.36002 (0.9632E-01)	***
DT2	-1.9353 (2.804)	
DT3	-2.8534 (2.806)	
DT4	-7.2425 (2.626)	***
DR1	8.0664 (5.300)	
DR2	-22.938 (5.975)	***
DR3	-16.142 (4.899)	***
DR4	-9.6390 (2.828)	***
DR5	32.863 (4.012)	***
DR6	10.406 (2.254)	***
DR7	-10.944 (5.040)	**
DR8	-9.0307 (3.055)	***
DR9	6.6337 (4.788)	
CONSTANT	27.343 (3.485)	***

Note:

* Significant at the 10% level

** Significant at the 5% level

*** Significant at the 1% level

TABLE G-4C Cash Rent Regression Results

N = 142

R-SQUARE = 0.7645

R-SQUARE ADJUSTED = 0.7322

VARIANCE OF THE ESTIMATE-SIGMA**2 = 132.12

STANDARD ERROR OF THE ESTIMATE-SIGMA = 11.494

DEPENDENT VARIABLE = CASHRENT

Variable Name	Estimated Coefficient (Standard Error)	Significance
FCRCHA	-0.13188E-05 (0.2020E-05)	
REV2	1194.3 (543.6)	**
NHAVCP	-0.11104 (0.1603)	
PCROP	0.33655 (0.4345E-01)	***
IRRIPA	0.54372 (0.1554)	
DT2	-2.0426 (2.940)	
DT3	-3.5057 (2.938)	
DT4	-6.7095 (2.668)	**
DR1	8.3904 (5.767)	
DR2	-25.496 (7.039)	***
DR3	-13.059 (5.773)	**
DR4	-7.6357 (3.361)	**
DR5	36.550 (4.665)	***
DR6	13.071 (2.886)	***
DR7	-3.5672 (7.294)	
DR8	-7.5640 (3.421)	**
DR9	11.569 (5.969)	*
CONSTANT	27.455 (3.245)	***

Note:

* Significant at the 10% level

** Significant at the 5% level

*** Significant at the 1% level