

Modeling US and EU Agricultural Policy: Focus on Decoupled Payments

Future Research on Decoupled Payments: New Modeling Directions and Data Needs

Edwin Young
Agricultural Economists
U.S. Department of Agriculture
Economic Research Service

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2003 planting decisions

	Base acres	2003 plantings	% of base planted
	(mil. acres)		
Total	266.2	256.8	96.5%
Wheat	75.5	60.5	79.4%
Rice	4.5	3.2	71.8%
Cotton	18.4	13.7	72.7%
Corn	86.8	79.1	90.0%
Soybeans	52.8	73.9	138.0%
Peanuts	1.5	1.4	92.6%
Other crops	26.7	25.2	94.4%

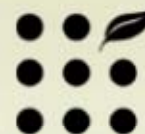
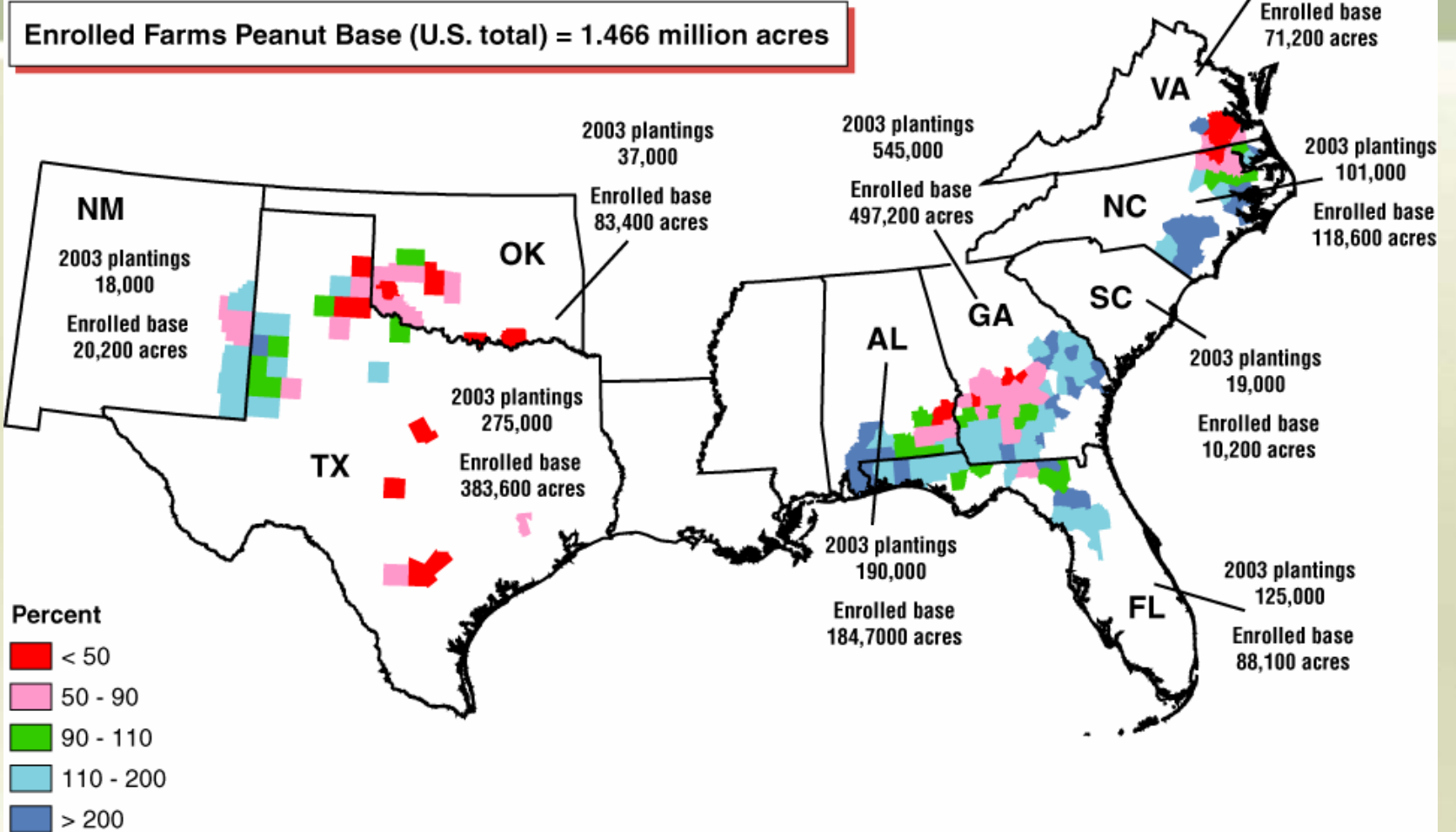


Figure 5

Percent of peanut base acres planted in 2003, by county



Note: Base acres reflect average 1998-2001 historical peanut plantings enrolled under the 2002 Farm Act.

Sources: ERS calculations using NASS (National Agricultural Statistics Service), Agricultural Statistics Database and FSA (Farm Service Agency), USDA, data. Data not available for all counties.



Collecting and analyzing data on farm-household responses

Getting inside the heads of farmers



- Focus groups
- Economic experiments
- Surveys (ARMS)



Focus groups

- Useful when information about decision makers is limited
- Elicit information on impacts and perceptions
 - on production decisions and management of risk
- Attitudes and impacts can be associated with farm and operator characteristics
 - types of crops and livestock produced
 - farm size, leasing arrangements
 - use of risk management practices, and
 - information sources used by the farmer
- Focus groups can not provide definitive answers



Economic experiment

Examine decision making

- economic stimuli
- controlled setting
- response by heterogeneous economic agents



Experimental economics

- Inform our understanding of behavior
- Widely accepted in the economics profession
 - general economic principles should govern behavior
- Help us make more “educated guesses”
- Cannot replicate every nuance



Economic experiment: counter-cyclical payments and base updating

Design of experiment:

- Pure market environment**
- Variable payment based on a target price**
- Base updating option**



Problems encountered

- **Used students**
- **Limited amount of time**
- **Meaningful rewards and penalties**
- **How do you frame the experiment?**
- **Can you simulate meaningful risks and rewards**
- **Still have not run the experiments**



Where do we go from here?

- **Learned a lot**
- **New cooperative agreement**
 - **Degrees of coupling**
 - **Students and farmers**



2003 ARMS probes farm-household decisionmaking

- **Land use**
- **Sources of income**
- **Allocation of decoupled payments**
- **Factors influencing planting decisions**
- **Risk attitudes**



Acreage allocation

- **Program acreage and yield**
 - **Base acres under 1996 and 2002 Acts by commodity**
 - **Program yields under the 2002 Act**
- **Total number of base acres owned and operated in 2003**
- **Planted and harvested acres by commodity in 2003**



Sources of farm income

- **Market revenue from commodities**
- **Government payments by type**
- **Custom work**
- **All other sources of farm-related income**
- **Off-farm income**
- **Wealth**



Lump sum payment

- If the operator reported government payment asked **“Where do you generally allocate the direct payments that you receive?”**
 - To the farm
 - To the household
 - To both the farm and the household (percent to each)
- If the operator did not report government payment asked **“If you received a windfall that paid \$10,000 every year for 6 years, where would you allocate the money?”**
 - To the farm
 - To the household
 - To both the farm and the household (percent to each)



For allocations to the farm, what share went to

- **Farm operating costs, excluding the rental of farmland**
- **Farmland rental**
- **Farm capital expenditures, excluding the purchase of farmland**
- **Farmland purchases**
- **Pay down farm debt**



For allocations to the household, what share went to

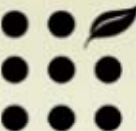
- **Family living expenditures, including food, clothing, appliances, medical care, education, vacations, etc.**
- **Maintain a cash reserve for the household**
- **Non-farm financial assets, such as stocks, bonds, or other investments**
- **Non-financial assets, such as non-farm real estate or home improvements**
- **Pay down non-farm debt**



Importance of factors when allocating crop acreage

Rate on a scale from 1 to 5

- **Rotational concerns**
- **The cost of inputs**
- **Expected commodity price**
- **Landlord preferences**
- **Commodity loan rates**
- **Counter-cyclical payments**
- **Direct payments**
- **Crop insurance**
- **Time commitments off the farm**
- **Environmental impacts**



Risk attitudes

How much do you agree or disagree with the following statements?

- I never have enough cash on hand or assets that can be easily converted to cash to pay all my bills
- I never hire custom work to be done
- I always spread the sale of my commodities over the year.

(on a scale of 1 to 5)



Country Perspective

- **Wealth endowment**
- **Risk attitudes**
- **Cultural differences**



Concluding comments

- Theory is useful
- Real world insights are critical
- Conference planned for next year
 - Impacts of government payments, CCPs



Presentation Appendix

Supplemental ARMS Questionnaire Information



GOVERNMENT PROGRAM BASE ACRES and PAYMENT YIELDS

Include all base acres operated by respondent, regardless of location or use.

5. What are your base acres and payment yields for—	Number of Base Acres		Base acres owned and operated in 2003 ACRES	Payment yields under 2002 act <i>(if multiple base acres, estimate average yield; weight by base acres)</i>	
	Under 1996 Act	Under 2002 Act		Direct Payments	Counter-cyclical Payments
a. Wheat	1119	1120	1121	1122 Bu.	1123 Bu.
b. Rice	1124	1125	1126	1127 Cwt.	1128 Cwt.
c. Corn	1129	1130	1131	1132 Bu.	1133 Bu.
d. Sorghum	1134	1135	1136	1137 Bu.	1138 Bu.
e. Barley	1139	1140	1141	1142 Bu.	1143 Bu.
f. Oats	1144	1145	1146	1147 Bu.	1148 Bu.
g. Upland Cotton	1149	1150	1151	1152 Lbs.	1153 Lbs.
h. Soybeans		1154	1155	1156 Bu.	1157 Bu.
i. Peanuts		1158	1159	1160 Lbs.	1161 Lbs.
j. Other oilseeds		1162	1163		



SECTION B ACREAGE and PRODUCTION

1. During 2003, what crops were harvested on the total acres (Section A, item 4) on this operation?
 (Exclude crops grown on land RENTED to others.)

[If share rented from others,
ask-]

1 CROP	2 How many acres were harvested?	3 What was the total production?	4 How much of this operation's share of the total production was (will be) used on this operation?	5 How much of the production was the landlord's share of the crop?
FIELD CROPS	ACRES	TOTAL AMOUNT	TOTAL AMOUNT	TOTAL AMOUNT
Corn for Grain	0105	0106 Bu.	0107 Bu.	0108 Bu.
Corn for Silage	0109	0110 Tons	0111 Tons	0112 Tons
Cotton, all types	0113	0114 Lbs.		0116 Lbs.
Peanuts	0117	0118 Lbs.		0120 Lbs.
Potatoes	0121	0122 Cwt.		0124 Cwt.
Rice	0125	0126 Cwt.		0128 Cwt.
Sorghum for Grain	0129	0130 Bu.	0131 Bu.	0132 Bu.
Sorghum for Silage	0133	0134 Tons	0135 Tons	0136 Tons
Soybeans	0137	0138 Bu.	0139 Bu.	0140 Bu.



SECTION E OTHER FARM INCOME

1. In 2003, did this operation receive Federal, State or Local Farm Program Payments?

YES - [Continue.] NO - [Go to item 3.]

2. What is the total dollar amount this operation received in 2003 for—

DOLLARS

a. Direct payments? (under 2002 Farm Act or AMTA - Production Flexibility Contract payments)	0525
b. Counter-cyclical payments?	0526
c. Loan deficiency payments (LDPs)?	0528
d. Marketing Loan Gains (MLGs)?	0531
e. Net Value of Commodity Certificates?	0533
f. Government payments received through cooperatives?	0534
g. Peanut Quota Buyout Program payments?	0535
h. Milk Income Loss Contract payments? (include transition payments)	0536
i. Agriculture Disaster payments? (include all disaster assistance and market loss payments. Exclude milk income loss contract payments reported above and Federal Crop Insurance and other indemnity payments.)	0537
j. Conservation Reserve Program (CRP) payments?	0538
k. Wetlands Reserve Program (WRP) payments?	0539
l. Environmental Quality Incentive Program (EQIP) payments?	0540
m. Any other federal agricultural program payments?	0541
n. Any other State or local agricultural program payments?	0542
3. What is your estimate of the total dollar amount your landlord(s) received in government payments for the acres you rented from them?	0543



23. Where do you generally allocate the fixed direct payments and or Production Flexibility Contracts (PFC) payments that you receive?

OR

23a. If you received an unexpected payment of \$10,000 every year for 6 years, where would you allocate the money?

b. [If item 23 or 23a = code 3, ask--]
What share would be allocated toward the--

(1) Farm

(2) Household

24. For allocations to the FARM, what share went to--

a. Farm operating costs, excluding the rental of farmland

b. Farmland rental

c. Farm Capital expenditures, excluding the purchase of farmland

d. Farmland purchases

e. Pay down farm debt

25. For allocations to the HOUSEHOLD, what share went to--

a. Family living expenditures, including food, clothing, appliances, medical care, education, vacations, etc.

b. Maintain a cash reserve for the household

c. Non-farm financial assets, such as stocks, bonds, or other investments

d. Non-farm assets, such as non-farm real estate or home improvements

e. Pay down non-farm debt

1 Farm - Enter code 1 and go to item 24

2 Household - Enter code 2 and go to item 25

3 Both Farm and Household - Enter code 3 and continue

CODE

1341

PERCENT

1342

1343

100%

PERCENT

1344

1345

1346

1347

1348

100%

PERCENT

1349

1350

1351

1352

1353

100%



26. [Show respondent *IMPORTANCE* codes in Respondent Booklet.]

When deciding how to allocate your crop acreage among different crops and when deciding how much of your total acreage to plant, rate the importance of the following factors—

Codes for item 26	
1	Very Important
2	Important
3	Neither Important nor unimportant
4	Unimportant
5	Not at all Important

	CODE
a. Crop rotations	1354
b. The costs of inputs	1355
c. Expected commodity price	1356
d. Landlord preferences	1357
e. Commodity loan rates	1358
f. Counter-cyclical payments	1359
g. Direct payments	1360
h. Crop insurance	1361
i. Time commitments off the farm	1362
j. Base acreage updates	1363



27. [Show respondent AGREE/DISAGREE codes in Respondent Booklet.]

How much do you agree or disagree with the following statements—

Codes for item 27	
1	Strongly Agree
2	Agree
3	Neither Agree or Disagree
4	Disagree
5	Strongly Disagree

- a. I never have enough cash on hand or assets that can be easily converted to cash to pay all my bills
- b. I never hire custom work to be done
- c. I always spread the sale of my commodities over the year
- d. I rely heavily on market information (*Government reports, private market news service*) in making my decisions
- e. My farming operation has adequate liability insurance
- f. Most of my machinery is new or in good repair
- g. The concentration of my farming operation in one geographic area substantially increases my total risk
- h. In case of emergency, I have sufficient back-up management/labor to carry on production
- i. I have adequate hail/fire insurance for crops
- j. I never hedge by using futures and/or options for marketing crops or livestock
- k. Off-farm work allows me to increase my family's income
- l. Off-farm work allows my family's income to be more stable
- m. Non-farm investments (*including non-farm businesses, real estate, stocks, bonds, cd's, cash, etc.*) offer a higher return than farm investments
- n. Non-farm investments (*including non-farm businesses, real estate, stocks, bonds, cd's, cash, etc.*) reduce my family's overall financial risk

CODE
1364
1365
1366
1367
1368
1369
1370
1371
1372
1373
1374
1375
1376
1377

