

2006-1985

/ /

2006-1985

()

%74

%10

0.4203

0.355

.% 4.2

%5.8

%3.6

%10

2015-2007

2015

.%3.96

2006

2015

The Iraqi Journal of Agricultural Sciences 41 (3):130-139,2010Mahmood.**ECONOMICAL ANALYSIS OF PADDY SUPPLY RESPONSE IN NAJAF GOVERNORATE DURING 1985 – 2006****Zahra H. Mahmood****Department of Agricultural Economics
College of Agriculture , University of Baghdad****ABSTRACT**

The main objective of this study was to estimate supply response of planted acreage for paddy , during the period 1985 -2006 . This function is estimated as a conditional supply function , because its dependence on the limited factor (irrigation water) . To get this estimate , the producer was considered as avenue maximizer instead of profit maximizer in order to determine the optimal allocation of water between its alternative usages . The results indicated that the major determinants of planted acreage are :the index number of lagged prices of the crop , lagged planted acreage, and irrigation water .These variables account for 74% of total variation in the planted acreage of paddy . The estimated elasticities indicated that water elasticities of planted acreage were higher than own and cross-price as it were 0.4203 .That means a 10% increase in irrigation water in Eupharate river causes a 4.2% increase in the planted acreage for paddy. The own elasticity for paddy crop with respect to its relative price was 0.355.That means a 10% increase in relative price of paddy results in 3.6% increase in planted acreage in short-term and 5.8% in long term. That may offset the importance of irrigation water in determination of planted acreage and in limitation of its responsiveness to price change . Planted acreage with this crop is predicted for the period 2007 – 2012 through the prediction of the values of all independent variables in the supply response function with the assumption of stability of all factors in 2015. Acreage planted with paddy in 2006 is expected to increase 3.96% in 2015 .

.(18)

.(13)

()

(10) Roy Lahiri

(19) Salassi

Herndon Chowdhury

%50

829.25

(7)

1670.25

(17)

. (1) 2006- 1985

2000

2001

(3)

1995 1994

1994 -1973 1995

(2) .% 28

%1.9

)

. %0.6

(

%2.0

% 0.3-

(%0.6)

-1985

.1

2006

*%	(/)	(/)	*%	(/)	(/)	
63.95	94	196 139 147	60.25	36.75	61	1985
65.47	91	228 232 141	64.42	33.5	52	1986
50.00	98	237 189	48.30	35.5	73.5	1987
60.28	85	262	56.05	31.25	55.75	1988
61.21	117 142	383	54.46	42.75	78.5	1989
51.32	99	313	47.49	40.25	84.75	1990
52.38	81	283	45.19	43.5	96.25	1991
34.18	84	274	44.93	75.25	167.5	1992
32.06	115 109 119	389	31.02	40.25	129.75	1993
31.07	115 140 113	218	28.73	46.75	162.75	1994
34.82	12	12	28.31	46.5	164.25	1995
40.64	5	5	38.22	41.75	109,25	1996
41.24	86	194	37.53	43.25	115.25	1997
35.99	50	81	32.73	49.5	151.25	1998
100.00 52.75	142 133 104	250	50.43	44.25	87.75	1999
100.00		309	100.00	4.25	4.25	2000
44.33		363	100.00	2.75	2.75	2001
61.73			47.00	25.5	54.25	2002
41.60			61.48	18.25	30.50	2003
43.04			41.19	36.25	88	2004
39.12			41.59	44.5	107	2005
			37.18	46.75	125.75	2006

* .2006-1985

-

:

2006-1985

.2

%		
2.2	1.9	
2.0	1.2	
0.6	0.3-	
.2006-1985		- : *

$$Y = e^{a+bt} \quad ; \quad (OLS)$$

$$n y = a + bt$$

: Y
: T
: b
: a

Y_1, Y_2

:(1)

$$LTR = Y_1 \cdot P_1 + Y_2 \cdot P_2 + n (X - f(Y_1, Y_2))$$

$Y_2, Y_1 \quad P_1, P_2 :$

(11) Lagrange Multiplier : n . 2006-1985

(TR)

$$X = X^0$$

1989

n, Y_2, Y_1

$$P_1 / P_2 = MPP_{X,Y_2} / MPP_{X,Y_1}$$

Profit maximization

$x \quad MPP_{X, Y_i}$

) $(i = 1, 2, 3, \dots) Y_i$

isorevenue

(

Production

curve

Possibilities

Constrained

:

Revenue Maximization

$$Y_i = f(P_1, P_2, X^0)$$

. X°

2006-1985

$$A_{RT} = f (P_{RT-1} , A_{RT-1}, W_T)$$

2006-

: A_{RT}

1985

: P_{RT-1}

: W_T

Autocorrelation
(8) Durbin- Watson

0.0274

h

.1.645

%5

Klein

.(15)

)

.(3)

(

.(9)

Naïve expectation

.(2)

.3

	P_{RT-1}	w_t	A_{RT-1}
PR_{T-1}	1.0	0.32	0.34
w_t		1.0	0.25
AR_{T-1}			1.0

4

.(20)

%5

0.6088

0.355

%5

2006-1985

OLS

.4

0.3703 (0.3)		
*0.3912 (2.0)	(/)	
*0.3552 (2.6)		
**0.4203 (3.4)		
0.74		
0.0274		h
** .91		F
	t	:
	%1 %5	***

(4)

(16)

%10

0.355

0.4203

%3.6

.%1

%5.8

R^2

0.74

0.4203

%10

F

.%4.2

4.4374

%1

h

$V_2 = 4, V_1 = 18$

.5

2006-1985

		()
0.4203 0.69	0.355 0.58	—

.2006-1985

: ()

$$\text{Esr} = (A_t / P_{t-1}) * (P_{t-1} / A_t)$$

حيث ان: A, P المتوسط الحسابي للسعر والمساحة على الترتيب ، فيما يتم استخراج مرونة الاجل الطويل Elr بقسمة المرونة قصيرة الاجل Esr على معلمة

التعديل B أي ان (14):

$$\text{Elr} = \text{Esr} / \beta$$

.(12)

2006-1985

(4)

()

%10

%3.6

2006-1985

2007

6

.2015-2008

%10

% 3.6

46.25 2008

2007

42.34

50.23

-2.67 -3.91

47.56

-0.056 -0.092

2012-2007

. 6

(/)	(/)	(/)	
-3.91	46.25	42.34	2007
-2.67	50.23	47.56	2008
N.A.	N.A.	48.67	2009
N.A.	N.A.	64.43	2010
N.A.	N.A.	70.54	2011
N.A.	N.A.	77.89	2012
N.A.	N.A.	77.90	2013
N.A.	N.A.	78.11	2014
N.A.	N.A.	78.01	2015

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