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FACULTY PAPER SERIES

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Cotton Land Tenure
Evaluation Software
Users' Guide

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Lotus 1-2-3 release 5.0
Windows 3.1/Windows 95 Version

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Department of Agricultural Economics
Texas Agricultural Extension Service
Texas Agricultural Experiment Station
Texas A&M University System

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Table of Contents

page

Preface 1
Installation Instructions 1
Overview 3
    Limitations 3
    Moving around the program 4
Required Data 5
    Base data section 5
    Land tenure section 6
    Enterprise budget section 6
Menu Options 7
    File menu 7
    Print menu 7
    Analyze menu 9
    Move to menu 9
    Miscellaneous menu 9
    Help menu 10
    Reports 10
        Base data 11
        Land tenure arrangements 12
        Enterprise budget information 13
        Sensitivity table for landowner and tenant, current year 14
        Sensitivity table for tenant, 1996-2002 15
        Sensitivity table for landowner, 1996-2002 16

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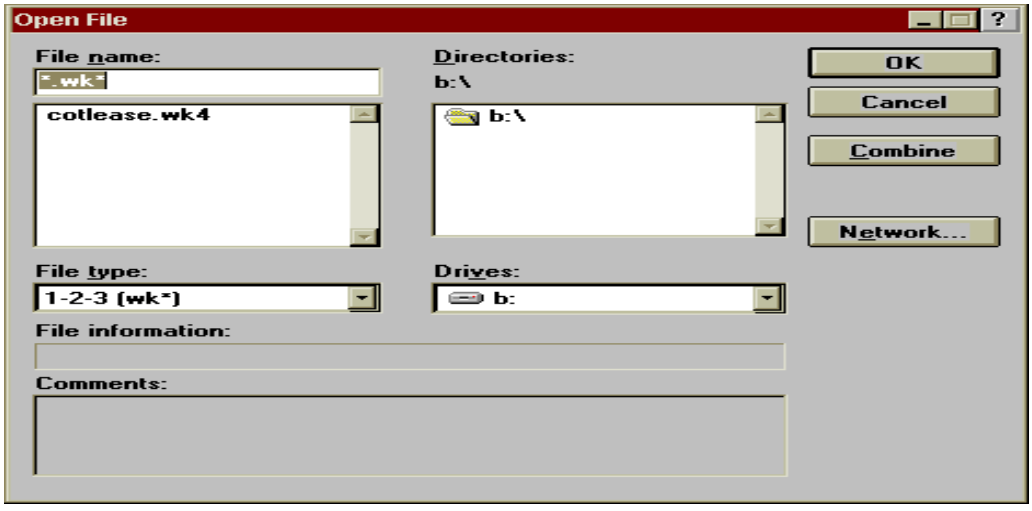
Preface

This Users' Guide supports the use of the **COTLEASE** Lotus 1-2-3 release 5.0 template on either conventional Windows 3.1 or Windows 95 microcomputer operating systems. This program was developed in conjunction with a similar program for rice, RICELEASE; there is also a GRNLEASE template for the major grain crops subject to the FAIR Act of 1996. A paper entitled "Landowner/Tenant Issues in the Texas Rice Industry," Agricultural and Food Policy Center Policy Issues Paper 96-3, has been written to address some tenant landowner issues in the Texas Rice industry. Although that paper does not speak of cotton or grain, it provides useful information about the FAIR Act, and it's effects on agriculture. Even though cotton- and grain-related market transition payments are of much lower magnitude ($/ac) than for rice, similar sets of software were prepared for use by operators and landowners. Copies of the software, Users' Guide, and the noted paper may be obtained either through your local county agent, Larry Falconer at Corpus Christi (512/265-9203), or Joe Outlaw in College Station (409/845-3062).

The development of this software was funded by the Texas Agricultural Experiment Station (project H-3914), Texas Agricultural Extension Service, Texas Rice Research Foundation, and Rice Belt Warehouse, Inc.

Installation Instructions

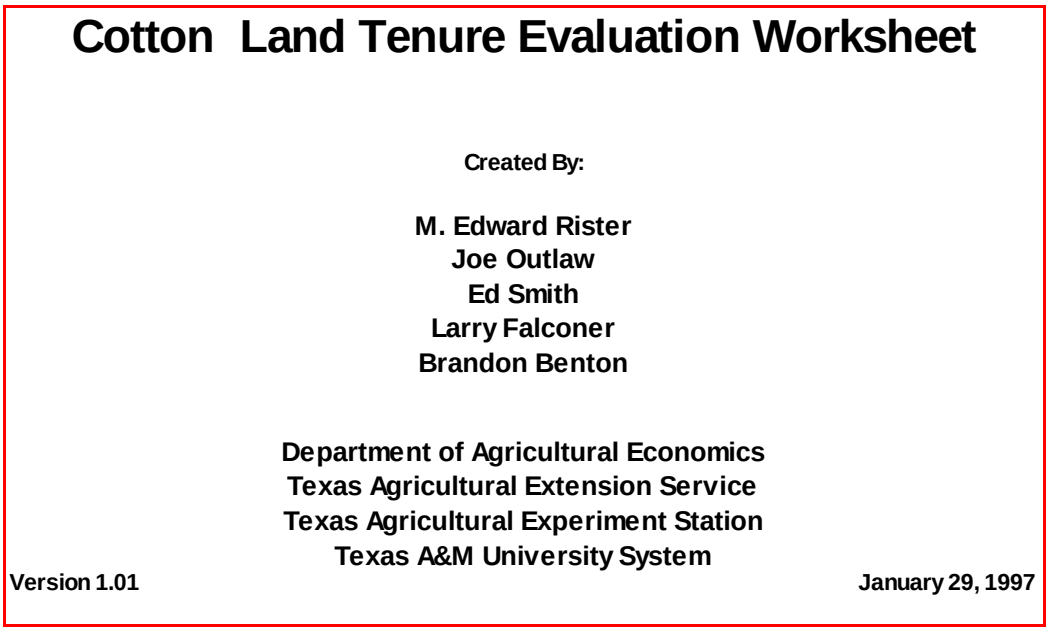
The Cotton Land Tenure Evaluation software is a Lotus template. This means that the program must be run using Lotus 1-2-3. This program is designed to run with either Windows 95 or Windows 3.1 or higher operating systems, and Lotus 1-2-3 release 5. A computer with 8mb of RAM and a 486 processor is also recommended, but not required. Since the program is a Lotus template, Lotus 1-2-3 r 5 must be running before you can load the program. Once inside



Lotus, you must open a file. At the top of the Lotus program you will notice a menu bar with several menu options on it. In the top left corner is the "File" menu item. To open a file, pull down the "File" menu and click the "Open" option. Upon selecting the Open option, the Open File dialog box will appear, as shown on the bottom of the previous page.

Under the "Drives" section, select the letter of the 3.5 inch drive on your computer. Then select the file entitled COTLEASE.WK4 from the list of files appearing along the left side. Click the OK button, and Lotus 1-2-3 r 5 will bring up the Cotton Land Tenure Evaluation program. You will note there are several sheets comprising this spreadsheet file; the customized menu features incorporated into the COTLEASE.WK4 file facilitate moving from one area of the spreadsheet to another as necessary.

After the program has loaded up the first thing you should see is the opening



screen below:
If you do not see the opening screen above, something is not working properly. Try and reload the file, going back through the steps outlined above. If problems persist, call Joe Outlaw in College Sation (409/845-3062).

Overview

What the Cotton Land Tenure Evaluation Program is designed to do: This Lotus template takes enterprise budget information for cotton farm operations and evaluates the expected returns to producers and landowners under various lease scenarios. The landowners' results from renting the land for cotton farming, are compared with their receiving 100% of the returns from market transition payments plus the user-specified net returns from an alternative enterprise, thus calculating the net advantage to landowners for renting their land for cotton production under the budgeted scenario over the life of the FAIR Act.

The Cotton Land Tenure Evaluation program allows the user to evaluate any desired share arrangement, but for ease of use, it contains ten default lease share options that the user may select from, and then modify if desired.

The user can print any one of six programmed reports by using the Print option on the menu. These reports include: 1) the base data on program yields, expected prices, and market transition payments; 2) land tenure arrangements (landowners' percentage of different cost items being shared); 3) enterprise budget information; 4) sensitivity table analyses for both the tenant and landowner for the current operating period; 5) sensitivity table analyses for the tenant over the life of the FAIR Act; and 6) sensitivity table analyses for the landowner over the life of the FAIR Act. The user may also print all six reports at once. An example of each of these reports appears toward the end of this Users' Guide.

Limitations: This program was designed with a very specific purpose in mind, that being to identify expected returns to landowners for two basic alternatives: (a) continuing to engage their land in cotton production, considering alternative tenure arrangements, expected production costs, and ranges of expected yields, and prices; and (b) ceasing use of their land in cotton production, and engaging it instead in an alternative use, whereby they realize 100% of the market transition payments and the user-specified net returns for the alternative enterprise. Therefore, it is limited in its analytical capabilities. The Cotton Land Tenure Evaluation **is not** designed to:

- Be prescriptive, i.e, indicate what one should do -- it simply evaluates alternatives based on user-supplied data.

- Evaluate leasing options for alternative enterprises -- this program only evaluates cotton leases.

- Account fully for risk management -- it does not incorporate users' subjective probabilities for expected yields and prices, the option of crop insurance, or the effects of marketing contracts, among other possible considerations.

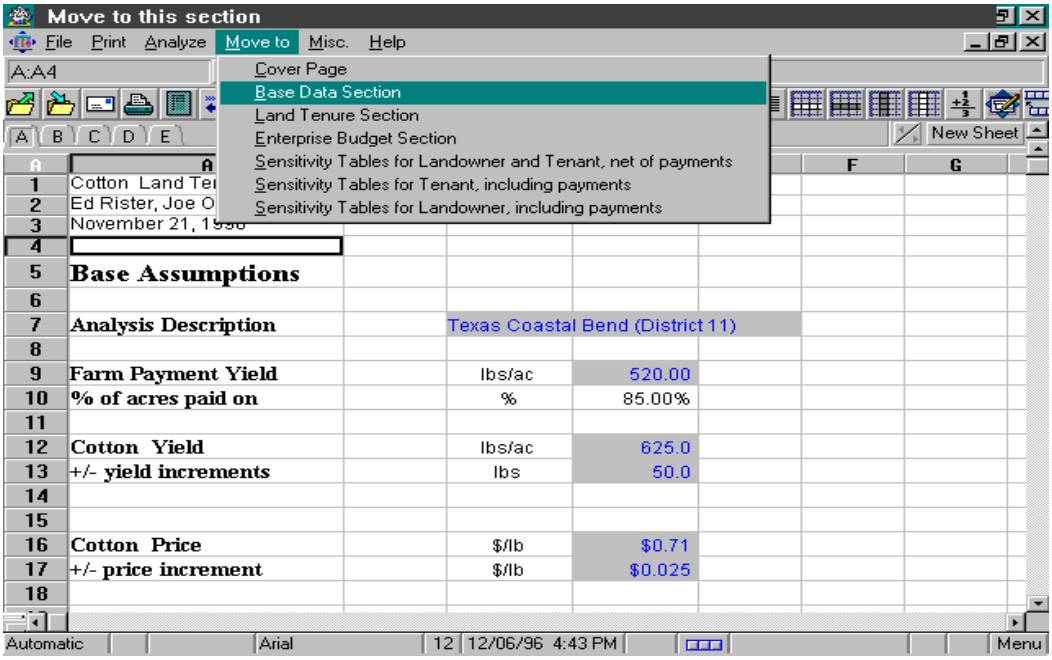
- Allow for direct, side-by-side comparisons of tenure arrangements for the cotton enterprise as well as for other cropping alternatives.

A more comprehensive software program designed to address the above issues will be available during the Summer of 1997.

Please Note:

The user may enter data in the cells that appear in blue text; blue text is "unprotected," allowing for users to change it, replacing it with their own values. All other cells are programmed as formulas, and should not be changed by the user. Doing so will corrupt the integrity of the program and result in the output being inaccurate. To protect against such accidental changes of formula cells, users are encouraged to maintain one or more original versions of the program in a secure location. **Note: in this Users' Guide, the unprotected cells appear in a light shade of grey.**

Moving around the program: To move from one section to the next, simply access the pull- down menus located at the top of the screen. Inside the "move to" pull-down menu is a list of all the places that you can go to inside the program.



To move around within any of the data entry or analysis sections, use the mouse in conjunction with the horizontal and vertical scroll bars at the right hand side and bottom of the display. The arrow keys may also be used to move within a page.

Required Data

The data required to generate results are entered into the (a) Base Data, (b) Land Tenure, and (c) Budget sections. These data include:

Base Data Section:

Analysis Description: This label is the information that will be printed in the heading of all the pre-programmed reports. It provides the user with the capability of labeling different analyses.

Farm Payment Yield: The established yield for a particular Farm Service Agency (FSA) farm unit; this yield is used by the FSA for determination of market transition payments. Be sure to adjust this figure to the appropriate level for the farm unit being analyzed.

Cotton Yield: Expected ginned lint cotton yield (lbs/ac) for the farm unit being evaluated.

Cotton Price: Expected harvest time price ($/lb) for ginned cotton lint during the budgeted period.

+/- Increments for What If: The price and yield increments in $/lb and lbs/ac that are used to define alternative price and yield levels for the tenant and landowner sensitivity analysis tables. This program calculates returns under various yield and price scenarios. The yield and price specified, along with the +/- increments, define the different yield and price levels used to calculate the returns. The sensitivity calculations are presented both for +/- one and +/- two increments about the specified yield and price levels, i.e. a total of twenty-five different yield and price combinations are evaluated.

Alternative Return: These values represent net cash flows from the next best alternative enterprise that will accrue to the landowner if the land <u>is not</u> rented to a tenant for cotton production. These values are used to calculate the net advantage to the landowner for allowing the land to remain in cotton production, and be farmed by a tenant producer.

Annual discount rate: This value is used in net present value calculations to adjust the tenant's and landowners' cash flows to evaluate the net returns per acre

over the 1997-2002 period. A desired rate of return for the land in the analysis could be used (e.g., 5-7%) or, alternatively, users may choose to use their opportunity cost of capital for borrowed funds (e.g., 7-12%). Returns for the 1996 crop year are not included in the net present value calculations since this crop year is in the past, and as such, does not affect future decisions. Note: once the 1997 crop year has occurred, 1997 consequences should be excluded from the NPV calculations; call Joe outlaw (409/845-3062) or Ed Rister (409/845-3801) for information on how to make these revisions.

Land Tenure Section:

Analyze : This column of values is the current tenure arrangement being evaluated. These data may be selected from a set of default options from the menu bar using the Analyze menu. The user has the option of customizing these scenarios by entering alternative values, or he/she may enter an entirely new alternative directly into the worksheet. The user may also alter the percentages that are shown in the ten customized tenure arrangements, even though the text is black. These cells are not formulas and changing them will not affect the operation of the program. Any tenure specific allocation changes that the user wishes to keep for subsequent analytical sessions need to be saved prior to exiting the program. Then, the next time the program is opened, the customized tenure arrangements will be available, including any saved changes; be advised, however, that the original tenure arrangements that were altered will no longer be available — for that reason, users are advised to keep an original version of the template stored in a secure location.

Enterprise Budget Section:

Pounds of Cotton Seed per Pound of Lint: The number of pounds of cotton seed that are associated with the production of one pound of ginned cotton lint, e.g., 1.62 is a standard norm for this value.

Variable Production Input Levels and Costs: All of the data entry regarding costs and inputs are done in the Enterprise Budget Section. These data are mainly usage rates of variable inputs with corresponding costs. Fixed costs may be entered on a per acre basis near the bottom of the enterprise budget (while these fixed costs will appear in the printed enterprise budget report, they are not considered in other aspects of the analysis (e.g., the sensitivity tables) as the fixed costs are considered irrelevant to the "grow cotton" vs "pursue an alternative enterprise" decision -- that is, the fixed costs will occur regardless of the enterprises grown on the land). The areas that require data entry are colored with blue text, to symbolize a data entry cell. **Do not enter data** in cells that do not

have blue text -- this will cause a formula to be erased, and the program to function improperly (refer to the Please Note item at the top of p. 4).

Menu Options

File Menu:

The File Menu can be accessed by clicking on the File section of the menu. The File Menu contains options for opening, closing, and saving files.

Open : the **Open** command allows the user to open a new file inside the Lotus program. If you open a new file, you will be leaving the Cotton Land Tenure Evaluation program and opening another Lotus Spreadsheet file.

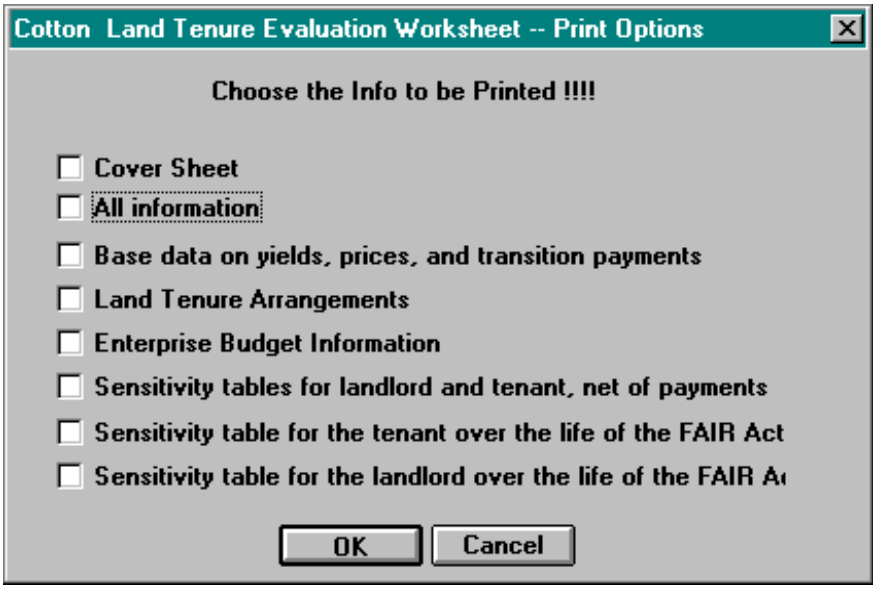
Close : the **Close** command allows the user to close a file inside the Lotus program. If you choose the Close option, then you will be closing the Cotton Land Tenure Evaluation program. It is recommended that the user save the current file by using the Save As option and entering an analysis-specific file name before closing.

Save As? : the **Save As?** command allows the user to save the current file. You may save the file under the current name, or change the name of the file and preserve the data under a analysis- specific file name. It is recommended to periodically save the file as you progress through the worksheet. This helps to prevent data loss due to an accidental data entry, or unforeseen program shutdown by the computer system.

Exit : the **Exit** command allows the user to exit the Cotton Land Tenure Evaluation program and the Lotus 1-2-3 program. It is recommended that the user save the data as discussed above before exiting.

Print Menu:

The Print menu is a customized menu that allows the user to print a variety of reports. The option exists to print either one report at a time, all reports at once, or a user-specified combination of the six. The user can access the print menu by clicking the Print option on the customized main menu bar. After clicking on the Print menu, the user is presented with the Print dialog box shown at the top of the next page.



Inside the dialog box, the user can select any combination of six pre-defined reports, and a cover page. To select the items to be printed, click on the box next to the title of the report(s) to be printed and click OK. Be sure your printer is on and loaded with paper before executing this print command.

The available reports include:

Base Data on Yields, Prices, and Transition Payments: this report contains the base data on FSA program yield, expected yields, expected price, annual $/ac cash flows for an alternative enterprise over the remaining life of the FAIR Act, and the discount rate used in the analysis for net present value calculations.

Land Tenure Arrangements: the specific land tenure arrangement (percentage of crop returns and different cost items being shared) that is being analyzed for the particular scenario, along with the rest of the available alternatives..

Enterprise Budget Information: the enterprise budget information that represents the cost structure for the specific cotton production scenario that is being analyzed.

Sensitivity table for landowner and tenant, net of payments: the sensitivity table analyses for both the tenant and landowner for only the current operating period, net of (ignoring) any transition payments.

Sensitivity table for tenant over the life of the FAIR Act: the sensitivity table analyses for the tenant over the life of the FAIR Act (1996 -2002), including

tenant's designated share of transition payments. Positive values indicate returns exceed all variable costs while negative values indicate the opposite.

Sensitivity table for the landowner over the life of the FAIR Act: the left side represents the sensitivity table analyses for the landowner continuing to rent his/her land to a tenant producer for cotton farming over the life of the FAIR Act (1996-2002), including landowners' designated share of transition payments. Positive values indicate landowners' share of returns exceed landowners' share of variable costs while negative values indicate the opposite. The middle column of values represents the respective annual net returns realized by landowners who discontinue their cotton lease and engage their land in its next best use, while also receiving 100% of the market transition payments. The right side of this output represents the net advantage to the landowner for continuing use of his/her land in cotton production compared to using it in the specified next best use and receiving 100% of the market transition payments. A positive value indicates returns are highest if cotton production is continued with a tenant while a negative value signals the landowners' pursuit of the next best alternative accompanied by their receipt of 100% of the market transition payments is more profitable.

The user may also print all six reports at once by selecting the **All Information** option from the dialog box.

Analyze Menu:

The Analyze menu allows the user to select any of ten pre-defined land tenure arrangements. A user can select the option they would like to analyze by clicking on the desired selection with the mouse, or by using the arrow and enter keys. The program then over-writes the contents of the Analyze column in the Budget page, and immediately updates all calculations to reflect the desired tenure arrangement. **If the user changes any component of the tenure or budget data, the REFRESH menu item needs to be executed as described below before the changes are valid.**

Move To Menu:

The **Move To** menu allows the user to move around throughout the worksheet. By selecting one of the seven options, the user can move to the sections specified by that option.

Misc Menu:

The Miscellaneous menu allows you to either (a) switch to the Lotus 1-2-3 menu

or (b) refresh the data and calculations inside the worksheet.

Reset to 1-2-3 menus: this command allows the user to toggle to the standard Lotus 1-2-3 menu system. If you do toggle to the standard menu, after completing the intended Lotus tasks, you may then return to the Cotton Land Tenure Evaluation program's customized menus by selecting the **Menu** option that has been added on the far right side of the standard Lotus 1-2-3 menu bar.

IMPORTANT

Refresh: allows a user who has changed data within the land tenure section or the enterprise budget section to recalculate the sensitivity tables using the new data values. For example, if you select the 1/4a share arrangement from the Analyze menu, then the program automatically computes the sensitivity tables using that data. However, if you go to the land tenure section and adjust the percentages after having selected a tenure alternative, the program will not automatically update the tables. Similarly, if you make an adjustment in the Enterprise Budget section or elsewhere, such changes <u>are not</u> automatically reflected in the results sections. The user must move to the Misc menu and choose the Refresh option. The program then uses the data that has just been changed and re-calculates the sensitivity tables.

Help: The Help menu allows you to access the Lotus 1-2-3 help screens.

Reports

Each of the following six pages is an example presentation of the six respective reports that may be generated using this program. The values used in this example are for a case farm situation in District 11, identified in December of 1996.

Cotton Land Tenure Evaluation Worksheet
Ed Rister, Joe Outlaw, Ed Smith, Larry Falconer, & Brandon Benton
January 29, 1997

Base Assumptions

Analysis Description	Cotton --Texas Coastal Bend (District 11)	
Farm Payment Yield	lbs/ac	520.00
% of acres paid on	%	85.00%
Cotton Yield	lbs/ac	625.0
+/- yield increments	lbs	50.0
Cotton Price	$/lb	$0.71
+/- price increment	$/lb	$0.025

		Annual Payment Rates		**Alternative return**
1996	$/lb	$0.0888	$/ac	($12.00)
1997	$/lb	$0.0725	$/ac	($12.00)
1998	$/lb	$0.0772	$/ac	($12.00)
1999	$/lb	$0.0715	$/ac	($12.00)
2000	$/lb	$0.0682	$/ac	($12.00)
2001	$/lb	$0.0553	$/ac	($12.00)
2002	$/lb	$0.0536	$/ac	($12.00)

Annual discount rate	%	10.00%

Land Tenure Arrangements	Landowner's Share of Crop and Expenses for Alternative Tenure Arrangements										
Cotton - Texas Coastal Bend (District 11)		1/4a	1/4b	1/3a	1/3b	1/5a	1/5b	C/2.5	C/3.5	C/5.0	C/0
	Analyze	#3	#4	#1	#2	#1	#2	#5	#6	#7	#8
REVENUES											
COTTON LINT (lbs/ac)	33.33%	25.00%	25.00%	33.33%	33.33%	20.00%	20.00%	0.00%	0.00%	0.00%	0.00%
COTTONSEED	33.33%	25.00%	25.00%	33.33%	33.33%	20.00%	20.00%	0.00%	0.00%	0.00%	0.00%
CASH RENT	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$2.50	$3.50	$5.00	$0.00
OTHER	33.33%	25.00%	25.00%	33.33%	33.33%	20.00%	20.00%	0.00%	0.00%	0.00%	0.00%
OTHER	33.33%	25.00%	25.00%	33.33%	33.33%	20.00%	20.00%	0.00%	0.00%	0.00%	0.00%
GROSS RECEIPTS											
VARIABLE COSTS											
SEED	33.33%	25.00%	0.00%	33.33%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
HERBICIDE	33.33%	25.00%	0.00%	33.33%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
INSECTICIDES	33.33%	25.00%	0.00%	33.33%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
FERTILIZER	33.33%	25.00%	0.00%	33.33%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PIX (Growth Regulator)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
DEFOLIANT	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
LABOR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
FUEL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
REPAIRS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
APPLICATIONS - AERIAL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
APPLICATIONS - GROUND	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
IRRIGATION	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
HARVESTING	33.33%	25.00%	0.00%	33.33%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
HAULING	33.33%	25.00%	0.00%	33.33%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
GINNING	33.33%	25.00%	0.00%	33.33%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
STORAGE	33.33%	25.00%	0.00%	33.33%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BOLL WEEVIL ERADICATION PROGRAM	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SCOUTING	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OTHER	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
INTEREST (weighted int rate)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
FIXED COSTS											
DEPRECIATION	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
INSURANCE	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
REPAIRS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
TAXES (property)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
INTEREST ON CAPITAL INVESTMENT	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OTHER FC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OTHER FC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Share of Transition Payment	33.33%	25.00%	25.00%	33.33%	33.33%	33.33%	33.33%	0.00%	0.00%	0.00%	0.00%
Tenure Arrangement Label	1/3a	1/4a	1/4b	1/3a	1/3b	1/5a	1/5b	C/2.5	C/3.5	C/5.0	C/0

Pound of Cotton Seed per Pound of Lint	1.62

COTTON PRODUCTION ENTERPRISE BUDGET Cotton --Texas Coastal Bend (District 11)

	UNITS/AC	$/UNIT	Owner/Operator $/AC	Tenant $/AC	Landowner $/AC	LAND RENTAL TERMS
REVENUES						1/3a
COTTON LINT (lbs/ac)	625.0	$0.71	$443.75	$295.83	$147.92	33.33%
COTTON SEED ($/ton)	0.5	95.00	48.09	32.06	$16.03	33.33%
CASH RENT($/ac)			0.00	0.00	0.00	$0.00
OTHER	0.00	0.00	0.00	0.00	0.00	33.33%
OTHER	0.00	0.00	0.00	0.00	0.00	33.33%
GROSS RECEIPTS			$491.84	$327.90	$163.95	n/a
VARIABLE COSTS						
SEED	1	16.20	16.20	10.80	5.40	33.33%
HERBICIDE	1	8.75	8.75	5.83	2.92	33.33%
INSECTICIDES	1	59.04	59.04	39.36	19.68	33.33%
FERTILIZER	1	19.65	19.65	13.10	6.55	33.33%
PIX (Growth Regulator)	1	6.86	6.86	6.86	0.00	0.00%
DEFOLIANT	1	11.00	11.00	11.00	0.00	0.00%
LABOR	1	11.69	11.69	11.69	0.00	0.00%
FUEL	1	11.14	11.14	11.14	0.00	0.00%
REPAIRS	1	3.48	3.48	3.48	0.00	0.00%
APPLICATIONS -- AERIAL	1	28.00	28.00	28.00	0.00	0.00%
APPLICATIONS -- GROUND	1	0.00	0.00	0.00	0.00	0.00%
IRRIGATION	1	0.00	0.00	0.00	0.00	0.00%
HARVESTING	625	0.10	62.50	41.67	20.83	33.33%
HAULING	625	0.00	0.00	0.00	0.00	33.33%
GINNING	625	0.11	67.50	67.50	0.00	33.33%
STORAGE	625	0.00	0.00	0.00	0.00	33.33%
Boll Weevil Eradication Program	1	23.14	23.14	23.14	0.00	0.00%
Scouting	1	5.00	5.00	5.00	0.00	0.00%
OTHER	1	0.00	0.00	0.00	0.00	0.00%
INTEREST (weighted int rate)	333.95	0.0340	11.35	11.35	0.00	0.00%
Variable Costs sub-total			$345.30	$289.92	$55.38	n/a
Returns Above Variable Costs			146.54	37.97	108.57	
FIXED COSTS						
DEPRECIATION	1	42.72	$42.72	42.72	0.00	0.00%
INSURANCE	1	0.00	$0.00	0.00	0.00	0.00%
REPAIRS	1	0.00	$0.00	0.00	0.00	0.00%
TAXES (property)	1	0.00	$0.00	0.00	0.00	0.00%
INTEREST ON CAPITAL INVESTMENT	1	0.00	$0.00	0.00	0.00	0.00%
OTHER FC	1	0.00	$0.00	0.00	0.00	0.00%
OTHER FC	1	0.00	$0.00	0.00	0.00	0.00%
Fixed Costs sub-total			$42.72	42.72	0.00	
TOTAL COSTS/ACRE			$388.02	$332.64	$55.38	
TOTAL NET/ACRE --Return to Land and Profit			$103.82	($4.75)	$108.57	
Break-even Price, All Production Costs Ie	$/lb		$0.621	$0.532	$0.089	
Break-even Price, All Production Costs	$/lb		$0.621	$0.532	$0.089	
Break-even Price, Variable Costs	$/lb		$0.552	$0.464	$0.089	
Break-even Price, Fixed Costs	$/lb		$0.068	$0.068	$0.000	

Cotton --Texas Coastal Bend (District 11)

Net of Transition Payments

What If Table for Tenant (Returns Above Variable Costs)

	Price ($/lb)				1/3a
+TENRAVC	$0.66	$0.69	$0.71	$0.74	$0.76
Yield (lb/ac) 525.00	(13.82)	(5.07)	3.68	12.43	21.18
575.00	1.66	11.24	20.83	30.41	39.99
625.00	17.14	27.55	37.97	48.39	58.80
675.00	32.62	43.87	55.12	66.37	77.62
725.00	48.09	60.18	72.26	84.34	96.43

What If Table for Landowner (Returns Above Variable Costs)

Cotton

	Price ($/lb)				1/3a
+LANDRAV	$0.66	$0.69	$0.71	$0.74	$0.76
Yield (lb/ac) 525.00	76.92	81.29	85.67	90.04	94.42
575.00	87.54	92.33	97.12	101.91	106.70
625.00	98.15	103.36	108.57	113.78	118.98
675.00	108.77	114.39	120.02	125.64	131.27
725.00	119.38	125.42	131.47	137.51	143.55

Annual and NPV of Returns Table for Tenant (RAVC) Cotton --Texas Coastal Bend (District 11)

Base w/o transition payments

Yield (lb/ac)	Price ($/lb)				1/3a
+TENRAVC	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	(13.82)	(5.07)	3.68	12.43	21.18
575.00	1.66	11.24	20.83	30.41	39.99
625.00	17.14	27.55	37.97	48.39	58.80
675.00	32.62	43.87	55.12	66.37	77.62
725.00	48.09	60.18	72.26	84.34	96.43

Annual, considering transition payments

1996	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	12	21	30	39	47
575.00	28	37	47	57	66
625.00	43	54	64	75	85
675.00	59	70	81	93	104
725.00	74	86	98	111	123
1997	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	8	16	25	34	43
575.00	23	33	42	52	61
625.00	39	49	59	70	80
675.00	54	65	76	88	99
725.00	69	82	94	106	118
1998	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	9	18	26	35	44
575.00	24	34	44	53	63
625.00	40	50	61	71	82
675.00	55	67	78	89	100
725.00	71	83	95	107	119
1999	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	7	16	25	34	42
575.00	23	32	42	51	61
625.00	38	49	59	69	80
675.00	54	65	76	87	99
725.00	69	81	93	105	117
2000	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	6	15	24	33	41
575.00	22	31	41	51	60
625.00	37	48	58	68	79
675.00	53	64	75	86	98
725.00	68	80	92	104	117
2001	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	2	11	20	29	37
575.00	18	28	37	47	56
625.00	33	44	54	65	75
675.00	49	60	71	83	94
725.00	64	76	89	101	113
2002	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	2	11	19	28	37
575.00	17	27	37	46	56
625.00	33	43	54	64	75
675.00	48	60	71	82	93
725.00	64	76	88	100	112
NPV*	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	27	65	103	141	179
575.00	94	136	178	219	261
625.00	161	207	252	298	343
675.00	229	278	327	376	425
725.00	296	349	402	454	507

*NPV is for 1997-2002, discounted into 1997 $s.

Annual and NPV of Returns Table for Landowner (RAVC)
Cotton --Texas Coastal Bend (District 11)

Cotton is grown — Base w/o transition payments

Yield (lb/ac)	Price ($/lb)				1/3a
+LANDRAV	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	76.92	81.29	85.67	90.04	94.42
575.00	87.54	92.33	97.12	101.91	106.70
625.00	98.15	103.36	108.57	113.78	118.98
675.00	108.77	114.39	120.02	125.64	131.27
725.00	119.38	125.42	131.47	137.51	143.55

Annual, considering transition payments

1996	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	90	94	99	103	108
575.00	101	105	110	115	120
625.00	111	116	122	127	132
675.00	122	127	133	139	144
725.00	132	139	145	151	157
1997	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	88	92	96	101	105
575.00	98	103	108	113	117
625.00	109	114	119	124	130
675.00	119	125	131	136	142
725.00	130	136	142	148	154
1998	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	88	93	97	101	106
575.00	99	104	108	113	118
625.00	110	115	120	125	130
675.00	120	126	131	137	143
725.00	131	137	143	149	155
1999	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	87	92	96	101	105
575.00	98	103	108	112	117
625.00	109	114	119	124	130
675.00	119	125	131	136	142
725.00	130	136	142	148	154
2000	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	87	91	96	100	104
575.00	98	102	107	112	117
625.00	108	113	119	124	129
675.00	119	124	130	136	141
725.00	129	135	142	148	154
2001	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	85	89	94	98	103
575.00	96	100	105	110	115
625.00	106	112	117	122	127
675.00	117	123	128	134	139
725.00	128	134	140	146	152
2002	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	85	89	94	98	102
575.00	95	100	105	110	115
625.00	106	111	116	122	127
675.00	117	122	128	134	139
725.00	127	133	139	145	151
NPV*	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	378	397	417	436	455
575.00	425	446	466	487	508
625.00	471	494	516	539	562
675.00	517	542	566	591	615
725.00	563	590	616	642	669

*NPV is for 1997-2002, discounted into 1997 $s.

No Cotton

($12.00)
$27.26
$20.07
$22.10
$19.61
$18.16
$12.44
$11.70
$77.97

Advantage to growing Cotton — Base w/o transition payments

Yield (lb/ac)	Price ($/lb)				1/3a
+LANDRAV	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	88.92	93.29	97.67	102.04	106.42
575.00	99.54	104.33	109.12	113.91	118.70
625.00	110.15	115.36	120.57	125.78	130.98
675.00	120.77	126.39	132.02	137.64	143.27
725.00	131.38	137.42	143.47	149.51	155.55

Annual, considering transition payments

1996	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	63	67	71	76	80
575.00	73	78	83	88	93
625.00	84	89	94	100	105
675.00	95	100	106	111	117
725.00	105	111	117	123	129
1997	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	68	72	76	81	85
575.00	78	83	88	93	97
625.00	89	94	99	104	110
675.00	99	105	111	116	122
725.00	110	116	122	128	134
1998	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	66	71	75	79	84
575.00	77	82	86	91	96
625.00	87	93	98	103	108
675.00	98	104	109	115	121
725.00	109	115	121	127	133
1999	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	68	72	77	81	85
575.00	78	83	88	93	98
625.00	89	94	99	105	110
675.00	100	105	111	117	122
725.00	110	116	122	128	134
2000	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	69	73	78	82	86
575.00	79	84	89	94	99
625.00	90	95	100	106	111
675.00	101	106	112	118	123
725.00	111	117	123	129	135
2001	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	73	77	81	86	90
575.00	83	88	93	98	102
625.00	94	99	104	109	115
675.00	104	110	116	121	127
725.00	115	121	127	133	139
2002	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	73	77	82	86	91
575.00	84	89	93	98	103
625.00	94	100	105	110	115
675.00	105	111	116	122	127
725.00	116	122	128	134	140
NPV*	$0.66	$0.69	$0.71	$0.74	$0.76
525.00	300	320	339	358	377
575.00	347	368	388	409	430
625.00	393	416	438	461	484
675.00	439	464	488	513	537
725.00	485	512	538	564	591

*NPV is for 1997-2002, discounted into 1997 $s

Landowner takes all payment and alternative returns for 1997-2002.

	Payment	Altern	Total
1996	39.26	-12.00	27.26
1997	32.07	-12.00	20.07
1998	34.10	-12.00	22.10
1999	31.61	-12.00	19.61
2000	30.16	-12.00	18.16
2001	24.44	-12.00	12.44
2002	23.70	-12.00	11.70
NPV97-02	130.23	-52.26	77.97