

ELS Cotton Loan Valuation Program

Developed by:

Dr. Lawrence Falconer, Mississippi State University Extension Service and Dr. Jeanne Reeves, Cotton, Incorporated

Sponsored by: Cotton, Incorporated – Dr. Jeanne Reeves, Project Supervisor

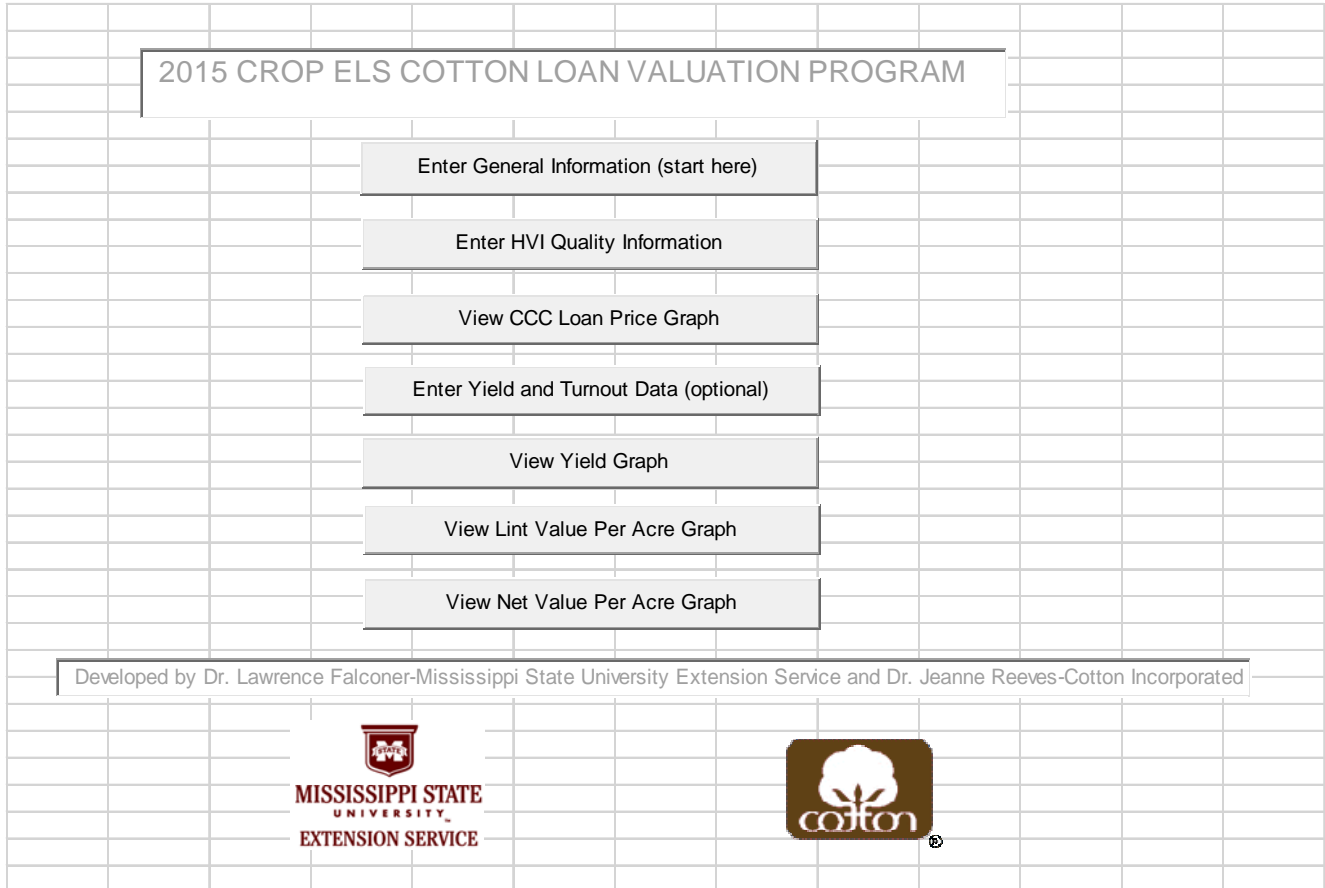


Figure 1. ELS Cotton Loan Price Calculator Main Menu.

Introduction

The ELS Cotton Loan Valuation Program is designed to facilitate calculation of Commodity Credit Corporation (CCC) cotton loan premium and discount values given high-volume instrument (HVI) classing information. If desired, this program has the capability to calculate net returns over harvest cost on a per acre basis. Results can be presented in both report and graphical formats. This program is primarily used for variety test evaluations, but it can be used without modification for other applications involving calculation of cotton loan values. This program is distributed as a MicroSoft© Excel spreadsheet. This spreadsheet is menu driven. **For the program to perform properly, the user must have the Excel macro security set to medium or low level.** To set macro security, select Tools from the Main Menu, Macro from the Tools menu then Security which will invoke the Security Level dialog box. You will have to exit Excel for these changes to take effect.

Enter General Information

The user should start by selecting the **Enter General Information** button on the Main Menu, shown in Figure 1. To start a new analysis, the user should click on the **Clear All Existing Data** button found on the **Enter General Information** screen to clear the spreadsheet (Figure 2). The user may then proceed to specify the title that will be printed on reports and graphs for these data. The user should note that information related to input on any cell can be obtained by moving the cursor over the particular cells marked with a red note marker in the upper right corner of that input cell. (See Figure 2)

If the user desires to calculate a return above harvest costs, the user needs to enter values in the cells directly to the right of the label Cotton Seed Value (\$/ton), Picking/Stripping and Moduling Cost per Cwt of Seed Cotton, and Ginning Cost per Pound of Cotton Lint. These are not required entries if the user only wants to calculate the loan value of the cotton lint. When finished with entering the required and optional general information, the user should return to the main menu by clicking the **Return to Main Menu** button.

2015 CROP ELS COTTON LOAN VALUATION PROGRAM					
Study or Variety Test Name :	2015 ELS Example				
Cotton Seed Value (\$/ton) :	\$ 185.00				
Picking/Stripping & Moduling Cost per Cwt of Seed Cotton:	\$ 3.20				
Ginning Cost Per Pound of Cotton Lint:	\$ 0.120				
Pounds of Seed Per Pound of Cotton Lint:	1.4				
<i>For additional information on how any input data is used, place the cursor over the desired input cell.</i>					
Return To Main Menu					
Clear All Existing Data					

Figure 2. General Information Data Entry Screen.

Enter HVI Quality Information

The user should click the Enter HVI Quality Information button on the Main Menu to access the section of the program that allows the user to enter all the require information to calculate the CCC loan premium and discounts for ELS cotton. Figure 3, shown below, displays an example of all the input data required for the calculation of net loan prices. As shown above, an **entry needs to be made in the cell of the Variety column for any calculation to take place**. The remaining information is related to HVI classing results. In the example shown below, the HVI results for the first variety indicated that this cotton was grade 1, leaf 3, micronaire of 3.8, length of 1.48 inches and strength of 44.0 grams per tex. There are no Extraneous Matter (Preparation and Bark or Other) entries for this sample. The eight columns beginning with the **Variety** column and ending with the **Bark or Other** column are the only cells in which data should be entered, if applicable. The loan premiums and discounts will be calculated and shown in the **Net Loan Price** column. When the user has completed entry of the desired HVI data, clicking the printer icon on the toolbar can print a report. The user should then return to the **Main Menu** by clicking on the **Return to Main Menu** button located in the upper left hand corner of the spreadsheet. (Note: the user can copy information from one line to another, but using the cut command to move data will result in an error in the calculations. To avoid this, the user can copy the relevant information, then delete the information from the original source line.)

Return To Main Menu	2015 ELS Example HVI Data and Quality Information													
											Strength Premium	Mike Premium	Extraneous Matter	Net Loan Price
						Extraneous Matter			Loan Rate		or	or		
Variety	Grade	Leaf	Mike	Length	Strength	Preparation	Bark & Other	Staple	Pre-Discounts	Discount	Discount	Discount	(cents/lb)	
Variety 1	1	3	3.8	1.480	44.0			52	78.25				78.25	
Variety 2	2	2	3.3	1.430	42.0			50	81.50		-455		76.95	
Variety 3	2	2	3.7	1.390	43.0			48	81.50				81.50	
Variety 4	1	1	3.9	1.330	44.0			46	81.60				81.60	
Variety 5	3	2	4.0	1.380	46.0			48	79.40				79.40	
Variety 6	1	2	4.1	1.400	43.0			48	81.70				81.70	
Variety 7	1	3	4.2	1.410	36.0			48	78.25	-1100			67.25	
Variety 8	2	1	3.9	1.370	46.0			48	81.50				81.50	
Variety 9	2	1	4.3	1.400	46.0			48	81.50				81.50	
Variety 10	1	3	3.6	1.440	39.0			50	78.25				78.25	

Figure 3. HVI Data and Quality Information.

After entering the HVI data and returning to the **Main Menu**, the user can generate a graph that compares the CCC loan values for each variety by clicking on the **View CCC Loan Price Graph** button. The graph generated for this example is shown below in Figure 4. The user may then print the graph by selecting (left clicking on the graph) and clicking on the print icon on the toolbar, or selecting the print option from the pull-down menu File option. To return to the main menu, the user should click on the **Return to Main Menu** button.

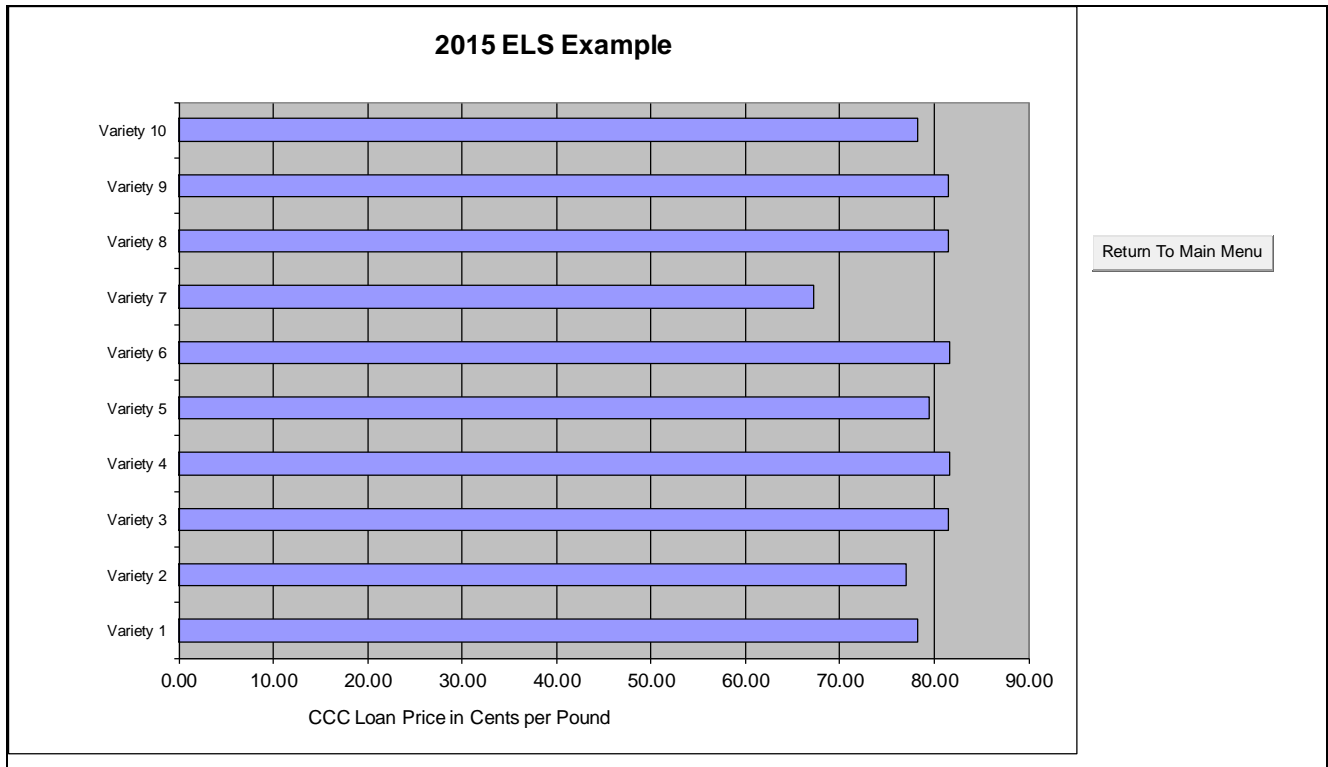


Figure 4. CCC Loan Price Graph.

Enter Yield and Turnout Data (Optional)

As mentioned in the introduction, the user has the option to calculate estimated total loan and cottonseed returns above harvest and ginning costs per acre and to view and print this information in both graphical and tabular format. This process starts with the user selecting the **Enter Yield and Turnout Data** button from the Main Menu. The user would then proceed to enter **Lint yield** in pounds per acre and **Turnout percentage** for each variety. The turnout percentage is used to calculate the total amount of seed cotton yield per acre. This estimate is then used as a basis for the harvest cost per acre calculations. Ginning costs are based on lint yield specified for the variety and ginning cost per lint pound that was entered in the general information screen. The user should select the Return to Main Menu button to get back to the main menu after entering, viewing or printing the yield and per acre return information.

Return to Main Menu		2015 ELS Example Yield and Per Acre Returns							
			Estimated				Picking		
	Lint		Seed	Lint	Seed	Gross	& Moduling	Ginning	Net
Variety	Yield	Turnout	Yield	Value	Value	Return	Cost	Cost	Return
	(Lbs/Acre)	(%)	(Lbs/Acre)	(\$/Acre)	(\$/Acre)	(\$/Acre)	(\$/Acre)	(\$/Acre)	(\$/Acre)
Variety 1	736	35.8	1030	576	95	671	66	88	517
Variety 2	699	37.9	979	538	91	629	59	84	486
Variety 3	674	35.9	944	549	87	636	60	81	495
Variety 4	671	34.5	939	548	87	635	62	81	492
Variety 5	670	35.7	938	532	87	619	60	80	479
Variety 6	654	36.9	916	534	85	619	57	78	484
Variety 7	653	37.7	914	439	85	524	55	78	391
Variety 8	644	37.4	902	525	83	608	55	77	476
Variety 9	635	36.1	889	518	82	600	56	76	468
Variety 10	644	35.6	902	504	83	587	58	77	452

Figure 5. Yield and Turnout Entry and Net Return per Acre Calculation.

Saving Data Files

To properly save a data file: First, select the **File** command from the Main Menu, then **Save As** from the File menu. The dialog box as shown in **Figure 6** should appear. The user should then enter a file name in the **File name** text box, and then click on the **Save** button. After saving the new file the first time, any updates to that data file can be saved by selecting the Save icon from the toolbar or the **Save** option from the File pull-down menu.

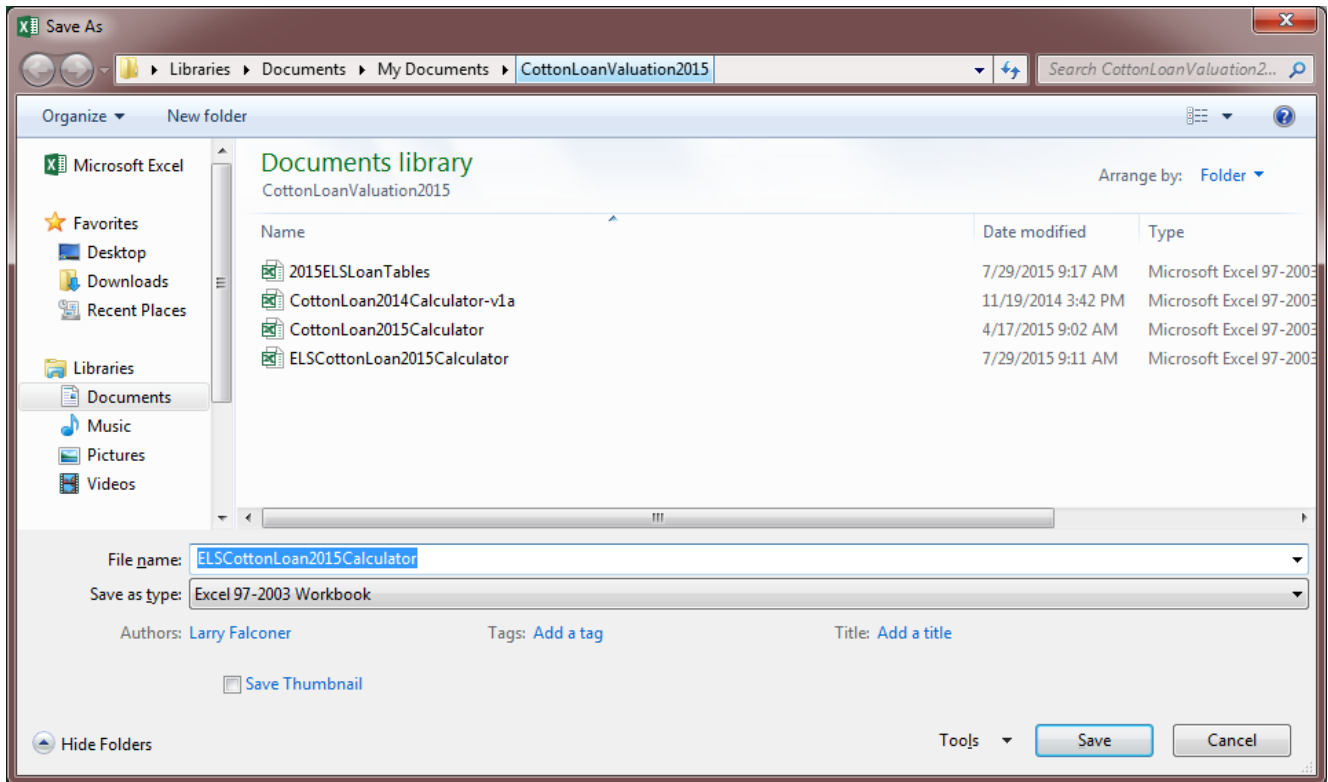


Figure 6. File Save Dialog Box.

Exiting the Program

To exit the program, the user can close the Excel window or select the Exit option from the File pull-down menu.

2015 ELS Cotton Premiums and Discount Tables

The schedule of loan rates by color, leaf and staple developed by USDA for ELS cotton for the 2015 crop year is shown in the attached table. In addition, the schedules of premiums and discounts established by USDA for extraneous matter, micronaire and strength are attached. Also, two excerpts from USDA Agricultural Marketing Service, Agricultural Handbook 566 are attached. The first excerpt is titled “Classification of American Pima Cotton” that explains procedures used in classifying American Pima cotton and includes a table that details length conversion for American Pima cotton. The second excerpt is titled “HVI Color Grades for American Pima Cotton” that shows the relationship between reflectance and yellowness in determining color grades for American Pima cotton.

2015 ELS (AMERICAN PIMA) COTTON PREMIUMS AND DISCOUNTS

2015 ELS Cotton Extraneous Matter

	Discounts	
	Level 1	Level 2
Preparation	-810	-1095
Grass, Spindle Twist, Bark & Other	-715	-1035

**Micronaire Differences for Eligible Qualities
2015 ELS Cotton**

Micronaire Reading	Points/lb.
3.5 & higher	0
3.3 - 3.4	-455
3.0 - 3.2	-975
2.7 - 2.9	-1465
2.6 & lower	-1955

2015-Crop ELS Strength

Strength Reading (g/tex)	Discount (pts./lb)
37.5 & higher	0
36.5-37.4	-850
35.5-36.4	-1100
35.4 & lower	-1350

**2015-CROP EXTRA LONG STAPLE "ELS"
(AMERICAN PIMA) COTTON**

Schedule of Loan Rates for Eligible Qualities

2015-Crop ELS Cotton Stored in Approved

2015 Loan

Warehouses in all Locations.

(Cents per pound, net weight, micronaire 3.5 & above and strength of 37.5 and above 1/)

Grade and Leaf		Staple		
		1-3/8 (44)	1-7/16 (46)	1-1/2 (48 & Longer)
		2015 Loan	2015 Loan	2015 Loan
Grade				
1		79.30	81.60	81.70
2		79.05	81.35	81.50
3		76.95	79.25	79.40
4		64.00	66.30	66.30
5		56.70	57.30	57.30
6		52.85	53.00	53.00
Below 6		37.00	37.00	37.00
	Leaf	Leaf Dis.	Colors	
		(ct/lb)		
	1	0.00	All	
	2	0.00	All	
	3	-3.45	1-3	
	4	-3.60	1-3	
	5	-3.70	1-4	
	6	-3.80	1-5	
	7	-3.80	1-6	

1/ A micronaire premium of 45 points (0.45 cents) per pound is reflected in the loan rates for the eligible qualities. Also, a strength premium of 59 points (0.59 cents) per pound is reflected in the loan rates for the eligible qualities. The adjusted national average loan rate reflected in the above schedule is 80.81 cents per pound. Cotton with micronaire readings below 3.5 and strength below 37.5 will be subject to the discounts in the schedules of micronaire and strength differences for ELS cotton.

IV. Classification of American Pima Cotton

Classification procedures for American Pima cotton are similar to those for American Upland cotton, including the use of HVI measurements. The most significant difference is that the American Upland color grade is determined by instrument measurement, while the American Pima color grade is still determined by highly trained cotton classers. Different grade standards are used because the color of American Pima cotton is a deeper yellow than that of Upland (see exhibit B, American Pima colorimeter diagram on page 22). Also, the ginning process for American Pima cotton (roller ginned) is not the same as for Upland (saw ginned). The roller gin process results in an appearance that is not as smooth as that obtained with the saw ginned process.

There are six official grades (grades "1" through "6") for American Pima color and six for leaf. All are represented by physical standards. There is a descriptive standard for cotton which is below grade for color or leaf. A different chart is used to convert American Pima fiber length from 100ths of an inch to 32nds of an inch. This chart is below.

AMERICAN PIMA LENGTH CONVERSION CHART

<i>Inches</i>	<i>32nds</i>
1.20 and lower	40
1.21 - 1.25	42
1.26 - 1.31	44
1.32 - 1.36	46
1.37 - 1.42	48
1.43 - 1.47	50
1.48 and above	52

HVI COLOR GRADES FOR AMERICAN PIMA COTTON

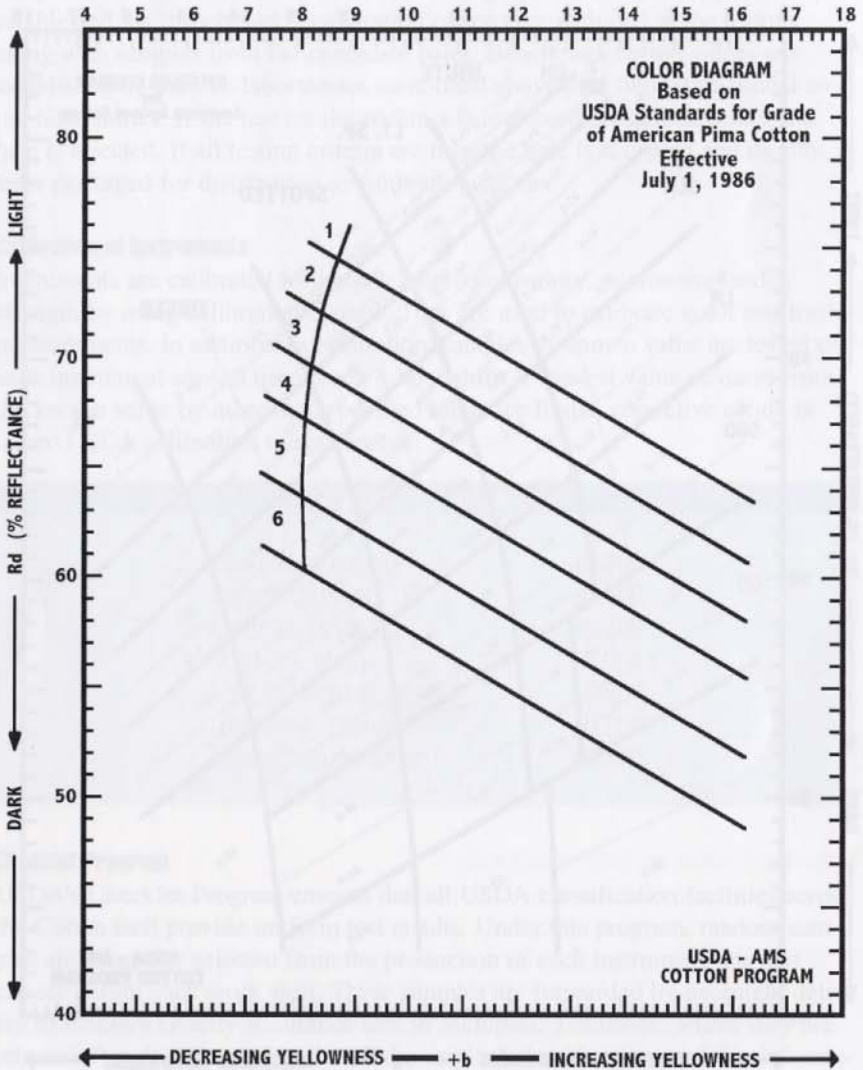


Exhibit B

HVI Color Chart for American Pima Cotton