**User Guide - Upland Loan Calculator Program**

The 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.

The program is distributed as a Microsoft© Excel workbook. **For the program to perform properly, the user must enable Macros. It should be possible to enable macros by simply clicking allow content when you open the file. If that does not work, set macro security by clicking on File (top left corner of Excel), then select Trust Center, then click on Trust Center Settings. In the Trust Center menu, click on Enable all macros, then click Ok.**

Please note that certain cells are locked to prevent formulas from being changed. If you need to unlock any of the sheets, go to Review in the Excel ribbon at the top of the book, click Unprotect sheet, and enter "cottoninc" as the password. You can also right click on the sheet tab (at bottom, e.g., HVI Quality Data) and select unprotect sheet.

Questions, comments, and suggestions are welcome. Please send an email (jdevine@cottoninc.com), we are happy to help.

Figure 1. Program Main Menu
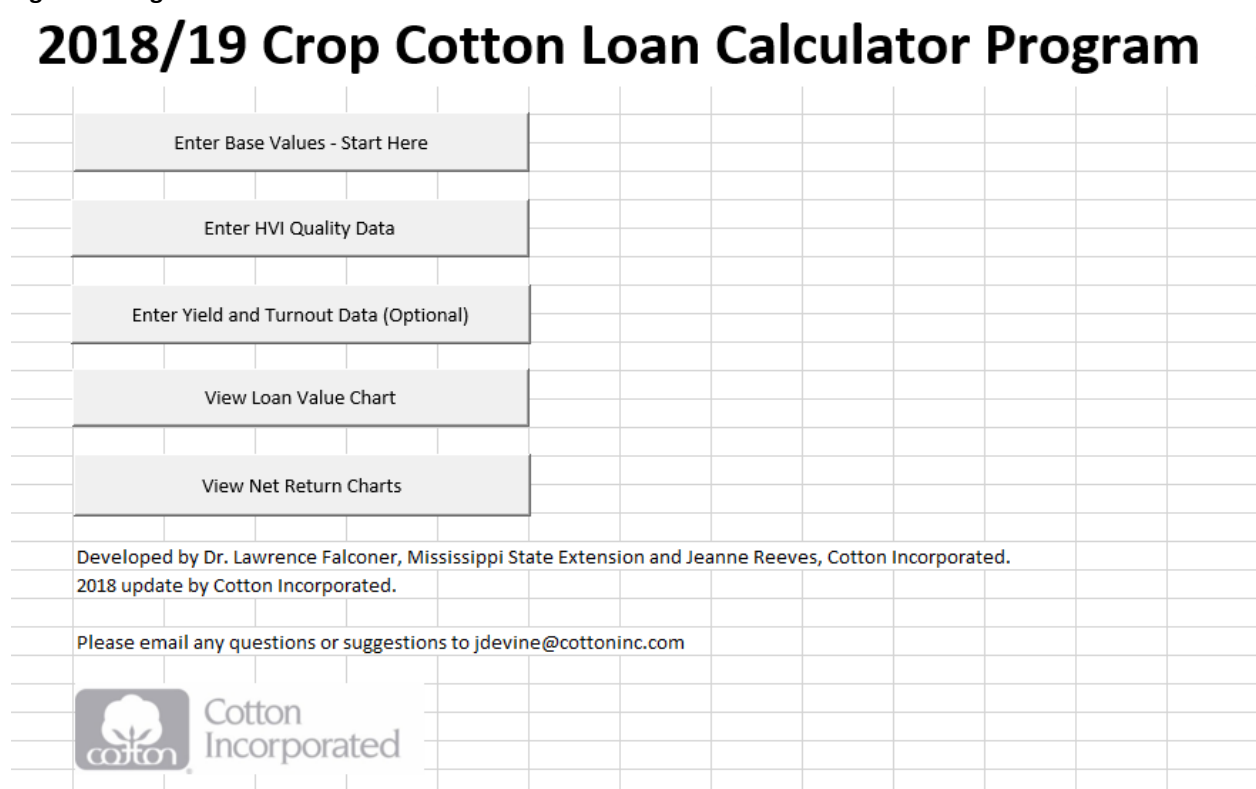
1. Enter Base Data

The user should start by selecting the **Enter Base Values** button on the Main Menu, shown in Figure 1.

To start a new analysis, the user should click on the **Clear Sample Values** button found on the **Enter Base Data** screen to clear the spreadsheet (Figure 2). The use should then enter values for each of the cells with blue text.

It should be noted that additional information regarding the use of the data in the program is available in comments for each of the cells with blue text. To view the comments, simply hover the cursor over these cells. Cells with comments are indicated by a tiny red triangle in the upper right corner of the cell (see Figure 2).

> In cell B6, the user specifies the title that will be printed on reports and graphs for these data.

> In cell B8, the user enters the base loan value in cents/lb.

> In cell B18, check the box if the cotton is produced in TX, NM, OK or KS. There are bark discounts that can be applied to these regions.

Only cells B6, B8, and the checkbox in cell B18 are required to calculate loan values. If the user would like to generate estimates for returns, cells B10-B16 also require entries.

> In cell B10, enter estimates of price per ton of cottonseed (USD/ton).

> In cell B12, enter the cost of harvesting in terms of USD/acre.

> In cell B14, enter the cost of ginning in terms of USD/lb.

> In cell B16, enter the estimated amount of seed weight in pounds per pound of lint.

Figure 2. Base Data Sheet

Enter Base Data - Start Here

	Base Values	Value Units
Study/Test Title (used in report & chart titles produced through this program)	2017/18 Sample Loan Values	n/a
Base Quality Price (41 Color, 4 Leaf, 34 Staple)	52.0	ce
Cottonseed Value (USD/ton)	185.0	USD/ton
Picking/Stripping & Moduling Cost per Cwt of Seed Cotton	3.20	USD/acre
Ginning Cost per Pound of Lint	.120	USD/lb
Pounds of Seed per Pound of Lint	1.412	lb of seed/lb of lint
Checkbox if cotton grown in TX/NM/OK/KS	☐ Check if TX/NM/OK/KS	

Required entry.
This value is the base from which any premiums or discounts are applied. The base quality is Color 41, Leaf 4, Staple 34.

Clear Sample Values

Restore Dummy Data

Return to Main Menu

2. Enter HVI Data

The user should go to the HVI Quality Data sheet to enter all the require information to calculate the CCC loan premium and discounts for upland cotton.

Figure 3, shown below, displays an example of all the input data required for the calculation of net loan prices. "Dummy" data were entered as examples. These numbers can be cleared or restored with the buttons on this page.

Variety names can be changed in the Variety/Sample Name column.

HVI data for color, leaf, length (in inches), strength, micronaire, length uniformity, and extraneous matter should be entered.

All of the cells with black text will update automatically with the entry of the HVI data.

Column Q gives the net change in the base loan rate due to quality differences.

Column R gives the net loan price in cents/lb (base rate plus net change due to quality differences).

Figure 3. HVI Quality Data

Enter HVI Quality Data for Each Sample

Enter HVI readings for each sample in boxes with blue font.
Premium/discount data in columns Q & R will automatically update with new HVI readings.

Return to Main Menu

Clear Sample Values

Restore Dummy Data

Note: Extraneous matter readings are 0, 1, or 2. Please enter the value for the appropriate level. Blank cells for extraneous matter are treated as 0.

Note: All color/leaf/staple combinations that are not listed in the CCC loan table have loan discounts of -4000 points except white grade cotton with leaf grade 8, those discounts are -2000.

link to USDA loan tables

Variety/Sample Name	Color	Leaf	Length (inches)	Strength	Mike	Uniformity	Extraneous Matter Bark	Preparation	Other	Staple (32nds)	Grade/Length Premium or Discount	Strength Premium or Discount	Mike Premium or Discount	Uniformity Premium or Discount	Extraneous Matter Discount	Net Premium or Discount	Net Loan Price (cents/lb)
Variety 1	11	1	1.03	17.9	2.3	77.5	0	0	0	33	-40	-500	-1090	-100	0	-1730	34.70
Variety 2	21	2	1.05	19.4	2.6	79.0	0	0	1	34	110	-260	-960	-75	-460	-1645	35.55
Variety 3	31	3	1.07	20.9	2.9	80.5	0	0	2	34	65	-260	-660	0	-695	-1550	36.50
Variety 4	41	4	1.09	21.4	3.2	82.0	0	0	3	35	60	-260	-405	5	0	-600	46.00
Variety 5	51	5	1.11	22.9	3.5	83.5	0	0	4	36	-280	-225	0	15	0	-490	47.10
Variety 6	61	6	1.13	24.4	3.8	85.0	0	0	5	36	-560	-180	10	35	0	-695	45.05
Variety 7	71	7	1.15	25.9	4.1	86.5	0	0	6	37	-770	-155	10	45	0	-870	43.30
Variety 8	11	1	1.17	27.4	4.5	80.0	0	0	7	37	485	0	0	0	0	485	56.85
Variety 9	21	2	1.19	29.9	4.8	81.0	0	0	8	38	495	10	0	0	0	505	57.05
Variety 10	31	3	1.21	31.9	5.3	82.0	0	0	9	39	390	45	-385	5	0	55	52.55

3. Yield and Turnout Data

After entering the HVI data, the user can enter yield and turnout data in order to calculate estimates for net returns.

Lint Yield needs to be entered in column B.

Turnout needs to be entered in column C.

All of the derivations in columns D through J have comments explaining how the values were determined.

Figure 4. Yield and Turnout Data

Enter Yield and Turnout Data for Each Sample

Enter yield and turnout data in boxes with blue font.

Return to Main Menu					Note: Seed yield is the product of lint yield and estimated pounds of seed per pound of lint entered on the Base Values sheet.

Clear Sample Data

Restore Dummy Data

Variety/Sample Name	Lint Yield (lbs/Acre)	Turnout (%)	Lint Value ($/Acre)	Estimated Seed Yield (lbs/Acre)	Seed Value ($/Acre)	Gross Return ($/Acre)	Picking & Moduling Cost ($/Acre)	Ginning Cost ($/Acre)	Net Return ($/Acre)
Variety 1	615	34.5	213	868	80	293	57	74	162
Variety 2	635	34.8	226	897	83	309	58	76	175
Variety 3	655	35.3	239	925	86	325	59	79	187
Variety 4	675	35.6	311	953	88	399	61	81	257
Variety 5	695	35.9	327	981	91	418	62	83	273
Variety 6	715	36.3	322	1010	93	415	63	86	266
Variety 7	735	36.5	318	1038	96	414	64	88	262
Variety 8	755	36.7	429	1066	99	528	66	91	371
Variety 9	775	36.9	442	1094	101	543	67	93	383
Variety 10	795	37.1	418	1123	104	522	69	95	358

4. Charts

There are two sheets with charts. The range for these charts will be updated automatically when the "Refresh Chart Data" button is pushed (adds/removes rows for the data range for the charts).

The first chart sheet (Charts – Loan Value) contains only a chart of loan values.

Figure 5. Loan Value Chart
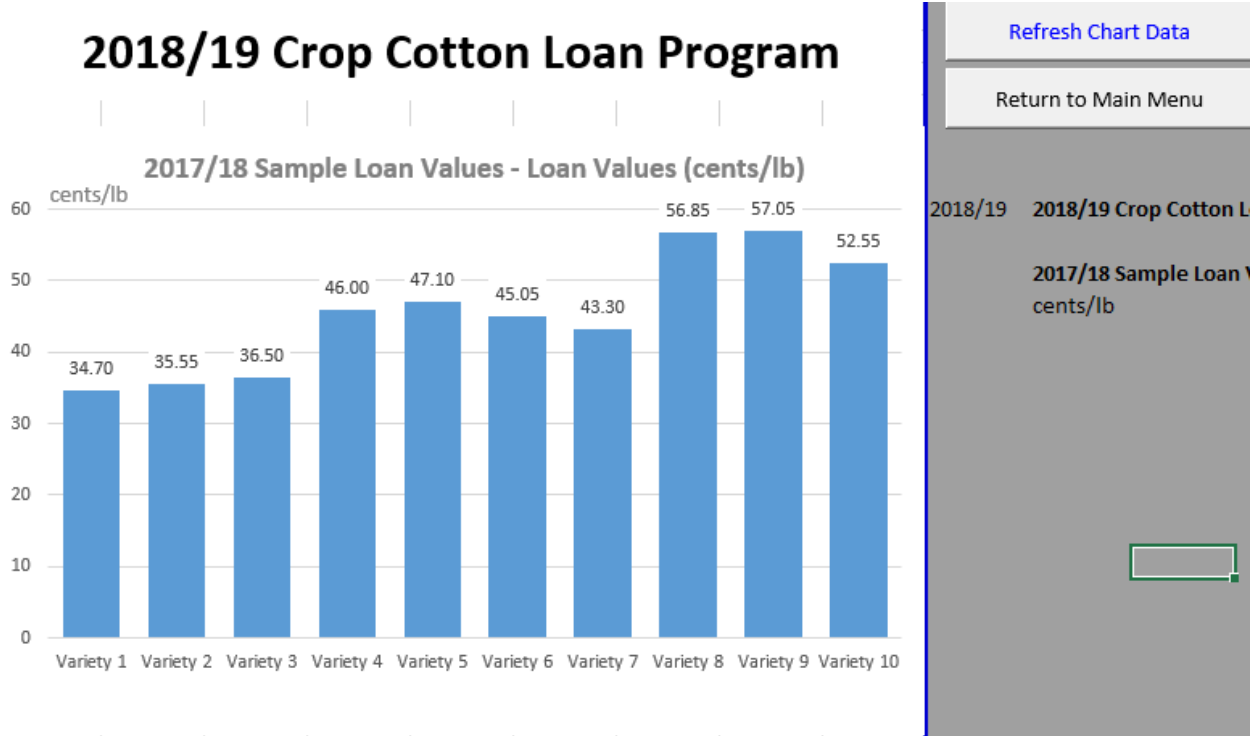
The second chart sheet (Charts – Net Return) contains loan values, lint yield, gross returns, and net returns.

Figure 6. Loan Value, Yield, Gross Return, and Net Return Charts