SUSTAINABLE BIOECONOMY

- FOR ARID REGIONS —



BENCO USERS GUIDE

Breakeven For New Crop Options

OVERVIEW

BENCO is an interactive tool that allows growers to compare the profitability of adopting alternative crops into an existing cropping system.

Results show per-acre net returns for one or two new crops and as whole-farm analysis. It also provides breakeven price and yields for new and existing crops. This handout provides an overview of the model.

Luis Ramos-Coronado, New Mexico State University Maryfrances Miller, New Mexico State University Jacqueline Bruhn, University of Arizona





Breakeven for New Crop Options (BENCO) Model

Using the BENCO model on your farm

The goal of creating the BENCO model was to allow farmers to evaluate, on paper, the adoption of new crops. Particular attention is paid to helping farmers adjust to emerging water constraints.

One of the main benefits of BENCO is the ability to customize it to an individual farm. All values listed in **Bold Red** can be modified.

This manual is divided into three parts:

- 1. Setting up your general farm characteristics
- 2. Setting up specific crops
- 3. Interpreting the results

A set of Reference appendixes is at the end of the manual. This includes:

- 1. A list of worksheets is at the end of the manual to provide an overview of all the sheets.
- 2. The worksheet names for the worksheet reporting the economic and cash costs and returns of producing each crop
- 3. A list of troubleshooting tips

Setting up your general farm characteristics

Start on worksheet AcresYieldsPrices&Water

1. Start by modifying acreage, yields, the expected prices, and water availability on this page. Use the checklist below to make modifications.

	В	С	D	E	F	G
TOTAL	ACRES IN FA	RM	1,500	% Irr	gation T	уре
CROP		% of farm	Acres	Flood Dr	ip-tape Sj	prinkleı
Guayul	e	40.0%	600	0%	0%	100%
Guar		0.0%	-	100%	0%	0%
Hemp f	or CBD Oil	0.0%	-	100%	0%	0%
Hemp f	or Grain	0.0%	-	100%	0%	0%
Hemp f	or Fiber	0.0%	-	100%	0%	0%

• Acres on the farm (cell D2). This should reflect only the acres available for production.

• Crops grown as a percentage of total acres. If a crop is not grown, simply enter a Zero.

• Make any adjustments to irrigation type. Since this model is developed for arid lands, all

croplands are assumed to be irrigated. Inged to crops of your choosing, which will require adjustments

• The red-font crops can be changed to crops of your choosing, which will require adjustments explained in the section on setting up specific crops.



- 2 TOTAL ACRES IN FARM 3 CROP % 4 Guayule
- 5 Guar (or specified crop)

Optional –Lease Arrangements. Lease agreements can be adjusted for two crops; guayule and a crop of your choice. If you lease land for a crop besides guayule, overwrite the crop you lease land for in the space for Guar.

Adjust Price and Crop Yield - These prices and yields will be used throughout the model. For

J K	L	М	N
Price an	d Crops Yield	ls	
CROP	Unit	Price	Quantity
Guayule Biomass	pound	\$0.08	22,000.0
Guayule Rubber Content	kilogram	\$0.00	0.0
Guar	pound	\$0.25	1,400.0
Hemp for CBD Oil	pound	\$1.00	4,000.0
Hemp for Grain	pound	\$0.75	1,500.0
Hemp for Fiber	pound	\$0.11	12,000.0

breakeven and return analysis to be correct, these estimates need to be realistic. *Unit* can be adjusted based on your preference.

Throughout the model, any cells in red font can be adjusted. For example, herbicide types can be changed. This worksheet applies to any inputs used throughout the farm. Crop specific inputs can be adjusted later on the worksheet *Inputs&PricesbyCrop*

Adjust Irrigation Water Available. Enter the acre feet of water available. The amount of irrigation water applied will be added later in the *Input&PricesByCrops* worksheet.

Р	Q	R	S	Т	U
Irrigation Wate	r Availab	le, Used,	and Saved	/Deficit	
		Total	Quantity	Quantity	Quantity
	Unit	Farm	Flood	Drip	Sprinkler
Total Available Water	ac ft	4,125			
Total Water Used			3,750	0	0
Total Water Saved or Deficit	ac ft	375			



2. Adjust Inputs and Input Prices for the whole farm on *worksheet GeneralInputPrices*. This worksheet applies to inputs that are used throughout the farm. Crop specific inputs can be adjusted

A	B	C	D
	Input Prices and Percentages that Apply	the Same to All Crops	\$/Unit
	- Inoculant	pounds	\$3.00
	Fertilizer		
	- Nitrogen	pounds	\$0.46
	- Phosphorus	pounds	\$0.36
	- Anhydrous Ammonia	pounds	\$0.21

in the next worksheet. Units are shown in red and can also be adjusted. Again, any cells in red font, like the type of herbicide, can be changed.

After adjusting input prices, scroll down to the shaded area to adjust the Irrigation parameters. Enter pumping costs and make any adjustments to efficiency levels and the costs of adopting or maintaining irrigation systems.

Price of Irrigation Water Applied w/ Pumping Costs	\$/ac ft	\$55.00
Irrigation Systems:		
Flood	Efficiency	80.0%
- Upfront Costs of New System	acre	\$0.00
- Years of Use Life	year(s)	0.0
- Annual Repairs & Maintenance	acre	\$3.00

- 3. Further adjustments can be made to customize the model to specific farming practices, including equipment size and value. Adjust Farm Machinery worksheet MachineryAssumptions. Remember, any cells shown in red can be changed. This worksheet allows you to enter the equipment used on your farm.
 - Efficiency values can be determined from engineering specifics of equipment. Change them only if you have the information available.

		D	Н		-	K
	Purchase	Budget	Fuel			
Machinery	Price	Life	Use per	Width	Speed	Efficiency
175 HP Tractor	\$180,000	10	8	N/A		
125 HP Tractor	\$80,000	15	5	N/A		



Setting up specific crops

- 4. **"Hard-coded" crops.** Guayule and alfalfa cannot be altered because establishment and growing costs are amortized in the mature budget. Cotton has additional charges and fees that are not found in other budgets, so the crop can't be overwritten with a different crop option.
 - If these crops won't be grown, just set the percentage of these crops to zero, as previously explained, in *AcresYieldsPrices&Water* worksheet.
- 5. Make Individual crop adjustments on *worksheet Inputs&PricesbyCrop*. Inputs that are specific to crops can be adjusted here.
 - Scroll to the right for the full list of crops.
 - Scroll down for the full list of crop inputs.

	B	С	J	K	L
1					
2			Hemp	Irr. Water	
3	Input Prices and Quantities by Crop		for Fiber	Reduction	Cotton
4		Unit		QU	ANTITIES I
5	Seed Costs per Unit		\$1.67	\$0.00	\$110.00
6	Seeds Applied; Quantity		50.00	0.00	1.00
7	Flood - Irrigation Water	ac ft	3.00	0.00	5.00
8	Flood - Irrigation Labor	hour	3.00	0.00	5.00

Special point - Seed Costs Input the seed costs per unit. You can use whatever unit is most convenient, use the same unit in the next row. The quantity applied refers to however much of that unit will be applied per acre.

2			Guayule
3	Input Prices and Quantities by Crop		Estab
4		 Unit	
5	Seed Costs per Unit		\$75.20
6	Seeds Applied; Quantity		1.00



6. Additional adjustments on worksheet Inputs&PricesbyCrop. Any of the items in red font can be

LAND PREPARATIONS AND MAINTENANCE	
Additional Land Prep. Labor	hour
Additional Land Prep. Labor	hour
CROP PRODUCTION	
Additional Crop Prod. Labor	hour
Additional Crop Prod. Labor	hour
HARVEST	
Additional Harvest Labor	hour
Additional Harvest Labor	hour
- Inoculant	pounds
- Nitrogen, Quantity	pounds

changed. This includes adding other land preparation, crop production, or types of harvest operations. The unit can be adjusted as well.

Other inputs specific to each crop can be added, including specific herbicides or specialty items used for harvest.

7. Adjust the tillage operations for each crop you are growing on *worksheet TillageOperations*. Enter the number of times each field operation occurs. If a crop is not under production, there is no need

_	AB	С	D	E	F
1					
2	_	Guayule	Guayule	Guayule	
3		Estab.	Grow	Harvest	Guar
4	Acres of Crop	-	-	-	-
5	Field Operations	X/Acre	X/Acre	X/Acre	X/Acre
6					
7	7 V-Ripper	1.00	-	-	-
8	8 Offset Disk	2.15	0.05	0.10	2.00
9	9 Drag	-	-	-	-

to make any adjustments. There is a good chance that you won't need to make any adjustments, the prepopulated values are based on conventional and accepted farming practices.

8. Adjust any custom harvest on *worksheet CustomOperations*. You can adjust the amount you are charged for any custom harvest operations. The unit can be adjusted, but the unit for the operation

A A	В	С	D	E	F
2	Operations that are Custom Hired		Guayule	Guayule	Guayule
3	or Equipment Leased/Rented		Estab.	Grow	Harvest
4		Unit			
5	V Ripper, Custom	acre	\$44.25	\$44.25	\$44.25
6	Quantity	acre	-	-	-
7	Disk, Custom	acre	\$0.00	\$0.00	\$0.00
8	Quantity	acre	-	-	-
9	Drag, Custom	acre	\$0.00	\$0.00	\$0.00
10	Quantity	acre	-	-	-

and the quantity must be the same.

Custom operations register as part of the crop expenses once the quantity is changed from zero to a positive value.



9. BENCO also helps farmers develop equitable lease arrangements on *worksheet*

EquitableLease_Guayule (and a second crop on the next worksheet). The values in the shared area reference the land values and land

2	Tenant and Landowner's Contributions to a Lease	
3	Agricultural Value of Land (per acre)	\$5,000
4	Annual Appreciation of Land Values	0.50%
5	Desired Return on Investment (%)	3.00%
6	Landowner's Share: Property Insurance	100.00%
7	Landowner's Share: Property Taxes	100.00%
8	Tenant's Share: Seed	100.00%
9	Tenant's Share: Fertilizer	100.00%
10	Tenant's Share: Herbicides	100.00%

21	Flexible Cash Rent Lease: Expected and Actual Crop Prices Received and				
22	Yield Sold				
23	Expected Price, \$/pound	\$0.07			
24	Actual Price, \$/pound	\$0.07			
25	Expected Yield, pounds/acre	22,000			
26	Actual Yield, pounds/acre	22,000			
27	Discount Rate	6.00%			

G	Н	I.	J	К	L	М
Crop Share	Calculations					
	Total Annual	PV of Total	Total Tenant	PV of	Total LO	PV of LO
Year	Costs	Costs	Costs	Tenant	Costs	Costs
1	\$1,265	\$1,205	\$1,111	\$1,058	\$154	\$146
2	\$440	\$399	\$285	\$259	\$155	\$140
3	\$502	\$433	\$350	\$302	\$152	\$132
4	\$441	\$363	\$285	\$235	\$156	\$128
5	\$503	\$394	\$350	\$274	\$154	\$120
6	<u>\$443</u>	<u>\$331</u>	<u>\$285</u>	<u>\$213</u>	<u>\$158</u>	<u>\$118</u>
Total	\$3,594	\$3,125	\$2,666	\$2,341	\$928	\$785

Casl

expenses typically paid by the landowner. Those below are typically covered by tenants. The tenant and landowner value will sum to 100%. If a tenant contribution is set to 40%, the landowner share will automatically be calculated as 60%.

10. The next step on this worksheet is to adjust the Flexible Cash Rent Lease Enter the expected and actual prices and yields. The discount rate is used to return results for the present value of a future costs faced by the landowner and tenant.

Crop Share Calculations are calculated based on the shares each party will cover for each of the types of expenses. Since Guayule is a six year crop, the discounted present value of the expenses are calculated for each party throughout the six year period.

	Tenant F	leturns and	Costs	Land	downer Ret	urns and Costs		
				Accumulate				Accumulate
	Annual	Annual	Annual Net	d Net	Annual	Annual	Annual Net	d Net
Year	Returns	Costs	Returns	Returns	Returns	Costs	Returns	Returns
1	\$0	\$1,111	(\$1,111)	(\$1,111)	\$175	\$154	\$21	\$21
2	\$1,760	\$285	\$1,475	\$364	\$175	\$155	\$20	\$42
3	\$0	\$350	(\$350)	\$14	\$175	\$152	\$23	\$64
4	\$1,760	\$285	\$1,475	\$1,489	\$175	\$156	\$19	\$83
5	\$0	\$350	(\$350)	\$1,139	\$175	\$154	\$21	\$105
6	\$1,760	\$285	\$1,475	\$2,614	\$175	\$158	\$17	\$122

Annual and accumulated costs and returns are calculated for the landowner and tenant. The values update automatically, these results can help determine equitable land leases.



Understanding the Results

11. Sensitivity analysis on NewCrop&WholeFarmNetReturns worksheet. This allows the user to easily

3	Sensitivity Analysis: Net Returns, \$/Acre Per Year Average, 50%							
4	of the Farm	Planted to	Guayule, a	at Varying	Prices,	Yields, an	d Cash C	
5	% Change	Yield,	Guayule	Price per	Pound o	f Biomass	ŝ	
	in Total	Per Acre	60.04	-	60.00	60.40	60.43	
6	Costs		\$0.04	\$0.06	\$0.08	\$0.10	\$0.12	
7		19,000	(\$236)	(\$46)	\$144	\$334	\$524	
8		20,000	(216)	(16)	184	384	584	
9		21,000	(196)	14	224	434	644	
10	0%	22,000	(176)	44	264	484	704	
11		23,000	(156)	74	304	534	764	
12		24,000	(136)	104	344	584	824	
13		25,000	(116)	134	384	634	884	
14		19,000	(\$298)	(\$108)	\$82	\$272	\$462	
15		20,000	(278)	(78)	122	322	522	
16		21,000	(258)	(48)	162	372	582	
17	10%	22,000	(238)	(18)	202	422	642	
18		23,000	(218)	12	242	472	702	
19		24,000	(198)	42	282	522	762	
20		25,000	(178)	72	322	572	822	
21		19,000	(\$175)	\$15	\$205	\$395	\$585	
22		20,000	(155)	45	245	445	645	
23		21,000	(135)	75	285	495	705	
24	-10%	22,000	(115)	105	325	545	765	
25		23,000	(95)	135	365	595	825	
26		24,000	(75)	165	405	645	885	

see how varying prices, yields, and total costs will affect net returns. This is a classic way of dealing with uncertainty.

Prices per pound of biomass are at the top of the table, ranging from \$0.04 to \$0.12. The middle value is populated from the prices entered in *AcresYieldsPrices&Water* worksheet. The values in red can be adjusted to any range of prices. The second column is a range of yields. Again, the middle value is set based on entries from *AcresYieldsPrices&Water* worksheet. The percent change in Total Costs (first column) calculates results for a percentage increase or decrease in Total Costs. These percentages can also be adjusted by the user.

As an example, the purple box shows net returns would be \$825/acre when prices are at \$0.12, yield is at 23,000 pounds per acre, and if Total Costs are 10% lower than specified in all the BENCO

settings.

There are three tables on this worksheet, the first is for guayule, the second is for guar (or whatever crop is specified, and the third (shaded gray) shows net return for the whole farm for a given crop mix.
12. Breakeven prices and yields are calculated for each crop in production, this is reported on the worksheet BreakevenInputs&Resources. In the screenshot below, 100 acres of Guayule is being

4	Α	В	С	D	E	F	G
2							
3					Bre	akeven Price	s and Yiel
4					Before Ch	ange	
5		Crop	Acres	Price	Unit	Yield	Unit
6		Guayule	100	\$0.06	pound	15,996.22	pounds
7		Guar (or specified o	0	NA	pound	NA	pounds

grown, with an initial estimate of

\$0.08/pound and an estimated yield of 22,000. The breakeven price and yield reported here uses those initial values.

The breakeven price divides the total cost for growing guayule by the specified yield to find a minimum



breakeven price of \$0.06. On the other hand, Total Costs divided by the specified price of \$0.08 provides an estimate of the minimum yield needed to breakeven, 15,996.22 pounds/acre.

Breakeven prices and yields are calculated for each crop in production. This is based on the total cost for that crop and the price and yield specified in the first step on the *AcresYieldsPrices&Water* worksheet.

13. Before and After analysis for a crop mix being considered is also available on the

A	В		D	E	F	6	н	1.1	J	к	L	м	N	0
3														
4			I	Before Ch	ange				After Cha	nge		Perc	ent Differen	ce
5	Crop	Acres	Price	Unit	Yield	Unit	Acres	Price	Unit	Yield	Unit	Acres	B/E Price	B
6	Guayule	100	\$0.06	pound	15,996.22	pounds	100	\$0.06	pound	15,996.22	pounds	0.00%	0.00%	0.00
7	Guar (or specified o	0	NA	pound	NA	pounds	0	NA	pound	NA	pounds	0.00%	NA	N
3	Hemp for CBD Oil	0	NA	pound	NA	pounds	0	NA	pound	' NA	pounds	0.00%	NA	N
	Hemp for Grain	0	NA	pound	NA	pounds	0	NA	pound	NA	pounds	0.00%	NA	N
0	Hemp for Fiber	0	NA	pound	NA	pounds	0	NA	pound	NA	pounds	0.00%	NA	1
1	Irr. Water Reductio	0	NA	\$/acre	NA	dollars	0	NA	\$/acre	NA	dollars	0.00%	NA	2
2	Cotton Lint	100	\$1.23	pound	1,847.75	pounds	100	\$1.23	pound	1,847.75	pounds	0.00%	0.00%	0.00
3	Cotton Seed	100	NA	pound	12,318.33	pounds	100 '	NA	pound	12,318.33	pounds	0.00%	NA	0.00
	Corn Silage	0	NA	ton	NA	tons	0	NA	ton	NA	tons	0.00%	NA	1
5	Sorghum	0	NA	bushel	NA	bushels	0	NA	bushel	NA	bushels	0.00%	NA	3
6	Spring Barley	0	NA	CWT	NA	CWTs	0	NA	CWT	NA	CWTs	0.00%	NA	1
7	Durum Wheat	0	NA	CWT	NA	CWTs	0'	NA	CWT	NA	CWTs	0.00%	NA	1
3	Alt Crop #1	0	NA	bushel	NA	bushels	0	NA	bushel	NA	bushels	0.00%	NA	3
	Alt Crop #2	0	NA	bushel	NA	bushels	0	NA	bushel	NA	bushels	0.00%	NA	1
2	Alt Crop #3	0	NA	bushel	NA	bushels	0'	NA	bushel	NA	bushels	0.00%	NA	1
1	Alt Crop #4	0	NA	bushel	NA	bushels	0'	NA	bushel	NA	bushels	0.00%	NA	1
2	Alfalfa Hay Estab.	0	NA	ton	NA	tons	0	NA	ton	NA	tons	0.00%	NA	2
3	Alfalfa Hay Prod.	0	NA	ton	NA	tons	0'	NA	ton	NA	tons	0.00%	NA	1
3 4 5			Copy ran	ge H6L2	3 and paste us	ing the Sp	ecial Pas	te Function	and "Val	ues and Source	e Formatti	ng" option	cell to C6.	

BreakevenInputs&Resources worksheet.

To do this, it requires setting all of the BENCO parameters for the first crop mix considered (or for current cropping percentages).

After all of the model is set as desired for the first scenario, copy the cells indicated by the purple box, which is range H6:L23

The instructions are provided at the bottom of the table. It says:

"Copy range H6..L23 and paste using

the Special Paste Function and "Values and Source Formatting" option cell to C6". Once the cells are highlighted, you can right click and choose Copy.

10 c	Paste Options: Ch Ch Ch Ch Ch Paste Special >	22 NA NA
1		INA

4			Ŀ
5	Crop	Acres	Price
6	Guayule 🛕	#REF!	NA
7	Guar (or specified o	#REF!	NA
8	Hemp for CBD Oil	#REF!	NA
9	Hemp for Grain	#REF!	NA

The next step is to put cursor in cell C6 (turquoise box with arrow). **IMPORTANT**: To paste the cells, make sure to use the right-click and use the Special Paste, paste as values only. This shaded box shown above will calculate percentage changes between the two scenarios.

If you accidentally use the incorrect paste function, this error will occur. In this case, just use the undo feature in the very top left of screen (or push Ctrl + Z) to undo the copy. Redo using right-click and the Special Paste and copy only the values as shown above.



14. The BreakevenInputs&Resources worksheet also provides Total Net Returns and Inputs. The Before/After and Change calculation requires the same Copy and Paste feature as above. With the BENCO model set correctly for the first crop mix scenario, copy the cells in the After column

R	S	Т	U
Total Net Returns and Inputs, Before a	nd After Adoption	l	
Resources and Inputs	Before	After	Change
Total Farm Net Returns (\$)	(\$18)	\$26,356	\$26,374
Irrigation Water Applied, AF	4,125	843	(3,282)
Crop Seeds (\$)	\$60,668	\$11,600	(\$49,068)
Fertilizers (\$)	\$214,409	\$33,030	(\$181,379)
Pesticides (\$)	\$89,535	\$21,153	(\$68,382)
Power Units: Labor (hours)	2,105	360	(1,745)
All Other Labor (hours)	4,125	1,559	(2,566)
Custom Hire Operations (\$)	\$256,575	\$16,000	(\$240,575)
Machinery Fuel, Maint. & Repairs (\$)	\$89,301	\$23,679	(\$65,622)
Machinery Fixed Costs (\$)	\$60,275	\$95,096	\$34,821
Irrigation Systems, Upfront Investment (\$)):		
Flood	\$0	\$0	\$0
Drip-tape	\$0	\$0	\$0
Sprinkler	\$0	\$0	\$0

Copy range T5..T14 and paste using the <u>Special Paste Function</u> and "Values and Source Formatting" option to cell S5.

(range T5:T14 – shown with a purple box.) Use the special paste, remember to right-click, and paste only the values (just like on previous page). This will hold the values for the first crop-mix scenario. As you make changes for the second scenario, the **After** column will show the changes that take place after the changes that you include. The **Change** column will show the difference between the two scenarios.

The empty box below what is shown in the screen share is unprotected. It provides an unprotected space for "scratch" calculations.



Worksheet Summary

Introduction This provides author information and a general overview of the purpose of the BENCO model.

NewCrop&WholeFarmNetReturns: (Model Output) – This worksheet provides sensitivity analysis for net returns from growing guar or guayule. This shows the net return for varying levels of crop price and production cost levels.

BreakevenInputs&Resources: (Model Output) – This worksheet provides users with before and after a considered change. Growers can set BENCO model to current crop mix and input costs, and then follow the instructions to set the results as the "Before Change" values. Once this is done, all considered scenarios will show the changes in net farm returns and in input costs from the current level to any scenario considered.

AcresYieldsPrices&Water: (Input Adjustments) – This worksheet allows producers to customize model to their farm and to adjust crop mix, expected crop prices and yields, and to estimate the available water.

GeneralInputPrices: (Input Adjustments) – This worksheet allows adjustments to the prices of farm inputs that are not crop-specific. This also allows farmers to evaluate the cost of irrigation improvements or adoptions.

Inputs&PricesbyCrop: (Input Adjustments) – This worksheet allows adjustments for input prices that are crop-specific.

MachineryAssumptions: (Input Adjustments) – This worksheet allows adjustments to machinery values and sizes.

TillageOperations: (Input Adjustments) – This worksheet allows adjustments in the number of times per acre actions are taken in the field. This includes land preparation, crop production, and harvest operations.

CustomOperations: (Input Adjustments) – This worksheet allows farmers to specify custom harvest rates for land preparation, crop production, and harvesting operations.

EquitableLease_Guayule/Crop#2: (Input Adjustments/Output) Worksheet allows grower to explore different leasing arrangements.

Crop Worksheets: (Model Output) – Economic and cash costs and returns for each crop are provided. These sheets are formatted for printing. Three worksheets cover guayule, one for each of three phases, establishment, growing, and harvesting.

Any opinions, findings, conclusions or recommendations expressed in this publication/work are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture. Grant #: 2017-68005-26867



List of Output Tables For Costs of Production

The crops listed here each have a worksheet that provides the Economic and Cash Costs and Returns of Producing each crop specified in the AcresYieldsPrices&Water worksheet. The worksheet that reports the costs and returns are reported on the worksheet listed on the left.

	A B	
2	TOTAL ACRES IN FARM	
3	CROP	
4	Guayule	Guayule Establishment, Growing and Harvest results each reported separately
5	Guar (or specified crop)	Sheet#4
6	Hemp for CBD Oil	Sheet#5
7	Hemp for Grain	Sheet#6
8	Hemp for Fiber	Sheet#7
9	Irr. Water Reduction: Set-as	Fallow
10	Cotton	Cotton
11	Corn Silage	Sheet#10
12	Sorghum	Sheet#11
13	Spring Barley	Sheet#12
14	Durum Wheat	Sheet#13
15	Alt Crop #1	Sheet#14
16	Alt Crop #2	Sheet#15
17	Alt Crop #3	Sheet#16
18	Alt Crop #4	Sheet#17
19	Alfalfa Hay Estab.	AlfalfaHayEst
20	Alfalfa Hay Prod.	AlfalfaHayProd

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Troubleshooting

BENCO is a powerful model, designed to be simple to learn and use.

- If anything becomes seriously messed up, just download a new fresh version of BENCO and start over.
- Most cells are protected to prevent accidental mistakes.
- As the zoom changes, some cells may become unreadable. With the sheet protected, you will not be able to resize columns. If this is a problem, zoom in on the view of the worksheet. If you still have issues, you can scroll your mouse over the obscured cell and the value will show in a bubble.
- When in doubt, leave pre-set values unchanged. Make the customizations that are important to your operation, but existing values have been suggested by other Arizona farmers.
- An undo command can be quickly utilized by typing Ctrl + Z
- AcresYieldsPrices&Water worksheet- crop percentages (column C) must sum to 100%. If the sum exceeds 100% an error message occurs. Values below 100% will show the sum in order to help the user easily see the remaining portion still available.