

Using the Yield Editor

I.F.A.R.M. offers the means to edit / adjust raw yield values using specific industry filters.

1. Yield Editor: Click on the Data Tab.

A. The functions of the Data Tab will display.

Map Data Spread Map			
Data Viewer Sample Management	Yield Management	Yield Editor	

B. Click on Yield Editor. The following interface page displays.

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Yield Editor continued...

C. To load and clean yield, left click on a yield file and drag up to the account window; or click in the box and select **Add Checked Tree Items**. Only one file at a time can be cleaned.



D. An indicator will appear while the yield is being loaded and filtered:

- As the yield is loading, the system analyzes the yield and automatically begins to filter out data that affects the bushels per acre values.



- When finished, the first pass of filtered results and map will display as points (default view).

Yield Dataset							-	Vield Ed	litor					Histog	ram	»
Remove All Add	checked	l tree item	IS					Point	- 🔀 Pan -	Remo	Ve Restore	Points Ca	ar Selection	Color	Avg Ai	ea
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Maximum Yield	1	356	686	Remove GPS Drift?	~		-	Clean	178.681	29.366	16.435	32454	39.384	322.080	15884.883	
Minimum Yield	1	10	31	Turn Row Removal?	1		556									
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				- Della												
Apply Filters Sav	e Sa	ve Setup													Dele	te Setup



2. Utilizing the Filters.

A. Once raw yield data is entered, specific default filters will be applied and remove affected data points (red values).

	Use?	Value	Deleted	the second se	Use?	Value	Deleted
Flow Delay	1	0	0	Header Dwn Req	V		0
Moisture Delay	V	0	0	Adjust for Moisture?	V		
Max Speed (mph)	1	10	1	Expand Dry?	J		
Min Speed (mph)	V	1	70	Manual Moisture Setting		15.5	
Maximum Yield	V	356	686	Remove GPS Drift?	J		
Minimum Yield	1	10	31	Turn Row Removal?	V		556
St. Dev. Filter	~	4	518	Avg. Yield Override		0	
				Total Bushels Override		0	

B. Filter Descriptions:

- Flow Delay: This will shift the measured yield back by the number of seconds entered in the value column. This filters out any points that don't have a yield value after the delay is applied.
- **Moisture Delay:** This will shift the moisture of the yield back by the number of points entered in the value column. This filters out any points that don't have a moisture value after the delay is applied.
- Max Speed: This filters out points where the harvester was traveling above the entered speed.
- Min Speed: This filters out points where the harvester was traveling below the entered speed.
- Maximum Yield: This filters out points that have a measured bushels per acre greater than the entered value.
- Minimum Yield: This filters out points that have a measured bushels per acre below the entered value.
- STD Filter: This filters out any points with measured bushels per acre that are outside a number of standard deviations away from the average yield. This feature is used to remove outlier points from the dataset that are much larger or smaller than the majority of yield points. The standard deviation and average values are unique to each yield dataset, and these values are present in the Statistics grid.
- Header Down: Filter out any points where the harvester did not have the header down.
- Adjust for Moisture: Automatically adjust the yield mass to dry out measured yield. If this option is selected without Expand Dry, then it only dries out yield with measured moisture above the standard moisture.
- Expand Dry: Used in conjunction with the Adjust for Moisture option. When this is selected, any yield that is drier than the standard moisture will be adjusted up to the standard moisture.
- Manual Moisture Setting: This overrides the standard moisture value with a custom moisture value to be used with both the Adjust for Moisture and Expand Dry options.
- Remove GPS Drift: If the locations of the points seem to waver instead of appearing in straight lines, then this
 option will average out the locations of the points to reduce the effect of bad GPS data.
- Turn Row Removal Start Pass Delay: This filters out points where the harvester is turning around to make another pass.
- Average Yield Override: This adjusts all of the yield values such that the average value matches the entered value (i.e. elevator weigh scale average).
- Total Bushels Override: If the total bushels of the harvested field is known, entering it here will apply that total and change all field data accordingly.
- C. Take note of Yield Statistics row / columns. The editor will display the raw data, and the filtered "clean" data.

atistics						
Mean	St. Dev.	CV	Points	Min	Max	Total Bu.
197.792	51.862	26.220	34316	0.003	1033.097	18521.516
178.681	29.366	16.435	32454	39.384	322.080	15884.883
	Mean 197.792 178.681	atistics Mean St. Dev. 197.792 51.862 178.681 29.366	Mean St. Dev. CV 197.792 51.862 26.220 178.681 29.366 16.435	Mean St. Dev. CV Points 197.792 51.862 26.220 34316 178.681 29.366 16.435 32454	Mean St. Dev. CV Points Min 197.792 51.862 26.220 34316 0.003 178.681 29.366 16.435 32454 39.384	Mean St. Dev. CV Points Min Max 197.792 51.862 26.220 34316 0.003 1033.097 178.681 29.366 16.435 32454 39.384 322.080



Apply Filters || Save

Yield Editor continued...

D. If further editing is required, users can manually adjust filter values, or turn off / on select filters.

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Flow Delay	V	0	Ó	Header Dwn Req	1		0
Moisture Delay	1	0	0	Adjust for Moisture?	V		
Max Speed (mph)	V	6	1	Expand Dry?	1		
Min Speed (mph)	V	2	70	Manual Moisture Setting		15.5	
Maximum Yield	1	235	686	Remove GPS Drift?	V		
Minimum Yield	V	50	31	Turn Row Removal?	V		556
St. Dev. Filter	1	4	518	Avg. Yield Override		0	
				Total Bushels Override	V	16000	

- E. To apply the changes, click on the Apply Filters button (at bottom of page).
 - A Loading map data indicator will display.



- The new data will load showing new "clean" data values, and the map will change to reflect the new values.

Remove All Add	checked	tree item	IS					Point	- 🛛 🔀 Pan -		Restore	Points		Color	Avg	Area
Account -	F	arm		Field	Samp	le Set		-		1000	1	-W-Stonewall	Rd		132.59	0.14
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Segments												<mark>-</mark> 1			195.40	41.93
Segment		_	Average Yie	Id (bu/ac) Ave	rage Moi	sture (%)		P			631	-1	-		213.70	24.95
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Filter Selection					_	_	_			1 1		RL.				
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Moisture Delay	1	0	0	Adjust for Moisture?	V			Vield St	atistics							
Max Speed (mph)	1	6	1585	Expand Dry?	J		- 1	Туре	Mean	St. Dev.	CV	Points	Min	Мах	Total Bu	
Min Speed (mph)	3	2	170	Manual Moisture Settin	g 🔲	15.5		Raw	197.792	51.862	26.220	34316	0.003	1033.097	18521.5	16
Maximum Yield	1	235	1727	Remove GPS Drift?	1			Clean	193.930	26.446	13.637	30069	83.385	256.583	16000.0	00
Minimum Yield	1	50	90	Turn Row Removal?	1		556									
St. Dev. Filter	J	4	119	Avg. Yield Override		0										
		1		Total Bushels Override	V	16000		T								

Note: The adjusted filters will change the number of data points removed (red values).

- **F.** You can continue changing and adjusting the filters values up and down until you are satisfied with the results. The original raw data will not be modified until you hit the **save** button:
 - **Note:** It is suggested to look at the number of red data points that you are removing with each filter value and determine (based upon the total number of points in a field) if any <u>one</u> filter adjustment is removing an excessive number of data points.
 - Removing a few hundred data points is not a significant problem unless the field size is so small that the total data points is also limited.
 - Removing up to **10%** of the field's total data points (from all of the filter values) is probably about all that you should consider eliminating (if that many) for a given field.





3. Saving the Edits.

A. When the edited yield data is to satisfaction, save the results by clicking the Save button.



- An indicator will display showing the yield is being saved.



B. The yield file will now carry the new filtered values.



4. Using Yield Editing Map Features

A. Once a yield file is entered, a representative map will display. The editor offers options / features to further investigate or display yield data.



B. To change the map from rows / points (default) to smooth, use the **Smooth** drop down menu to view the options. Click on the **Smooth** option.





- The map image will change to reflect a smoothed / solid map visual.



- Use the same drop down menu to change the map back to the rows / points option.
- C. Click on the Pan drop down menu to see the options.



- Choosing **Pan** simply allows the user to move the map image around in the visible window.
- Selection allows the user to create a custom polygon around a specific area in the yield map.
- Once **Selection** is chosen, move the cursor to an area of interest and click and move the mouse, drawing / tracing the area. The more clicks of the mouse, the tighter the trace.







Yield Editor continued...

- Continue clicking around an area until you complete the polygon. Double click to finish the polygon.
- When finished, the polygon will grey out the area and render a dark boundary.



- In the Yield Statistics area, a new row / columns will be added displaying yield data just for that selected area.

Type Mean St. Dev. CV Points Min	Max
Raw 129.279 65.238 50.463 11359 0.194	975.041
Clean 127.415 49.001 38.458 10884 0.463	331.140
Selection 60.025 42.110 70.155 346 0.551	160.058

D. Removing Points. If an area of yield is such the user wants to remove it from the field, use the selection tool as previously shown to select an area of the field. Take notice of the number of Points being chosen.



- To remove the points selected, click on the **Remove** button.



- There will be a short processing notice, then the map will display with the traced area removed.



- The resulting yield calculations will change to reflect the removed data points.
- If the file is **Saved**, the new data will be saved minus the removed points.

E. Restoring Points. To replace removed points, simply click the Restore Points button.



- There will be a short processing notice, then the map will display with the traced area points returned.
- **Note:** If points are removed, and the file saved... the Restore function will not be able to return the previously deleted points.



Yield Editor continued...

5. Saved Setups.

- A. The Yield Editor offers the means to create Saved Setups of selected filters / values to help standardize yield cleaning; and to help speed up the editing process.
- B. With a cleared template, go through the filter options and make selections / adjustments that will represent a repeatable cleaning event (below).
- C. Click on the Save Setup button at the bottom of the screen. A naming prompt will appear. Add in the name of the saved setup. Make it as descriptive as possible so it is easy to distinguish.

Vield Dataset							
Remove All Add	l checke	d tree items	5				
Account -	F	arm		Field	Sampl	e Set	
a	pp.ifarı	minc.com	says:			×	
Segments	lease ent	er a name	for the new s	etup.		1000	
Segment	Corn - 25	i0 mx 30 m	n 🔶				
	Prever	nt this page	from creatin	ng additional dialogs.			
Filter Selection				ок	Cance	el	 Click OK when the name has been entered. A save notice will appear indicating the Save
	Use?	Value	Deleted		Use?	Value D	ed Setup has been saved.
Flow Delay		0	0	Header Dwn Req	7	0	
Moisture Delay	1	0	0	Adjust for Moisture?	V		Notice
Max Speed (mph)		6	0	Expand Dry?	1		Setup has been saved
Min Speed (mph)	V	2	0	Manual Moisture Setting	1	15.5	
Maximum Yield		250	0	Remove GPS Drift?	V		
Minimum Yield	V	30	0	Turn Row Removal?	1	0	
St. Dev. Filter		0	0	Avg. Yield Override	2	0	
				~			Close

Saved Setup: Corn - 250 mx 30 mn Soybeans - 90 mx 20 mn

- D. Continue to add saved setups as needed (by crop / speed / yield max - min / filters turned on-off, etc.).
 - The saved setups will be visible when the Save Setup drop down menu is selected.
- E. To load a setup, first enter a yield file in the account window. The normal processing will take place.
 - Use the drop down menu and select the desired setup.

Filter Selection							_		- 63	ALC: N		212.	07 5.22	
	Use?	Value	Deleted	And the second s	Use?	Value	Deleted		13000	22	4. 10	227.	01 3.59	
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Moisture Delay	J	0	0	Adjust for Moisture?	V				103	100	2			
Max Speed (mph)	V	20	0	Expand Dry?	V									
Min Speed (mph)	1	0	0	Manual Moisture Setting	V	15.5	1	100			2.000			
Maximum Yield		400	1	Remove GPS Drift?	V			2016 Mic	rosoft	the last	12 Million			
Minimum Yield	J	0	0	Turn Row Removal?	1	_	486	Corporation	© AND{	39.72471, 4	0.64178			_
St. Dev. Filter	V	4	2	Avg. Yield Override	1	0		Type	Mean	St. Dev.	CV	Points	Min	Мах
								Raw	188.146	55.263	29.372	8543	10.922	439
Saved Setup:				*				Clean	178.923	46.346	25.902	8054	10.328	357
	Corn -	250 mx 3	10 mn	راس				1						
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- The setup parameters will apply.

Filter Selection	_	_	_			_				and I	10	212.	07 5.22	
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Min Speed (mph)		2	0	Manual Moisture Setting	-	15.5	1							
Maximum Yield	-	250	1	Remove GPS Drift?	-			© 2016 Mic	rosoft	A (-)	E-			
Minimum Yield		30	0	Turn Row Removal?	V	_	486	Corporation	© AND _{	39.73132, 4	0.64275			
St. Dev. Filter	V	4	2	Avg. Yield Override	V	0	1	Type	Mean	St. Dev.	CV	Points	Min	Max
Constant.								Raw	188.146	55.263	29.372	8543	10.922	439.
Saved Setup:	Corn -	250 mx 3	0 mn	~				Clean	178.923	46.346	25.902	8054	10.328	357.
								4						•

F. Click on the **Apply Filters** button. The normal processing will take place and produce the results based on the setup parameters.

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			97			
	osoft Corporation					
WAD ing	-	-89.72795	, 40.64726	-		
Vield Sta	listics				-	
Туре	Mean	St. Dev.	CV	Points	Min	Мах
Type Raw	Mean 188.146	St. Dev. 55.263	29.372	Points 8543	Min 10.922	Max 439.

G. If the yield results are satisfactory, click the Save button to save the edited yield.



6. Starting Over.

A. If you are finished with a given session and want to look at new data, simply select the **Remove All** or **Remove Selected** buttons to clear the entries. You can then drag new yield files to the account window to open a new editing project.

Vield Dataset Remove All Add checked tree items			
Boucher Farms	All	98AcreField	2013-10-19 - Corn