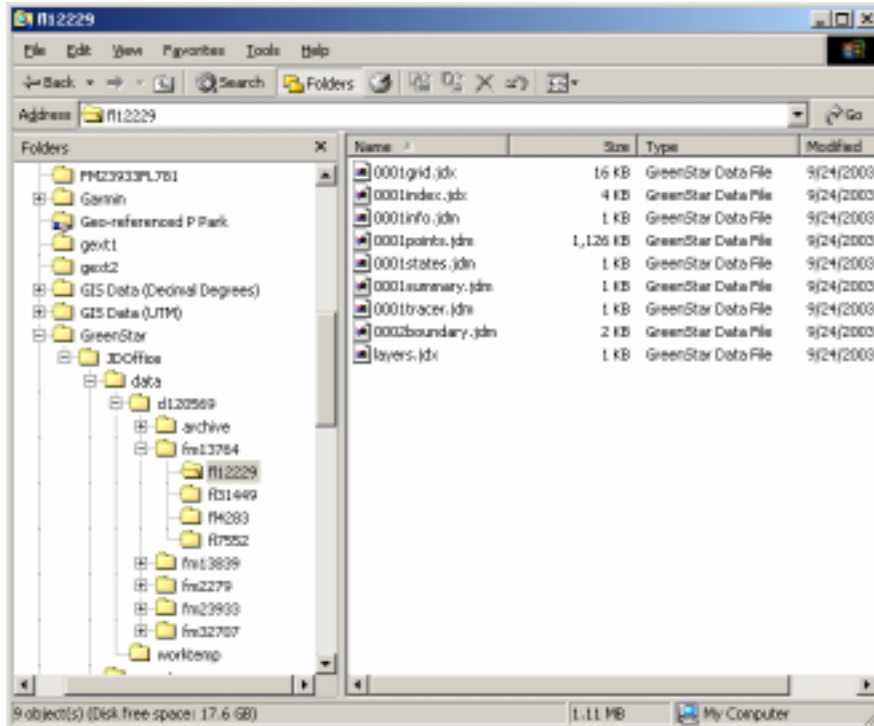


# Making Yield Contour Maps Using John Deere Data

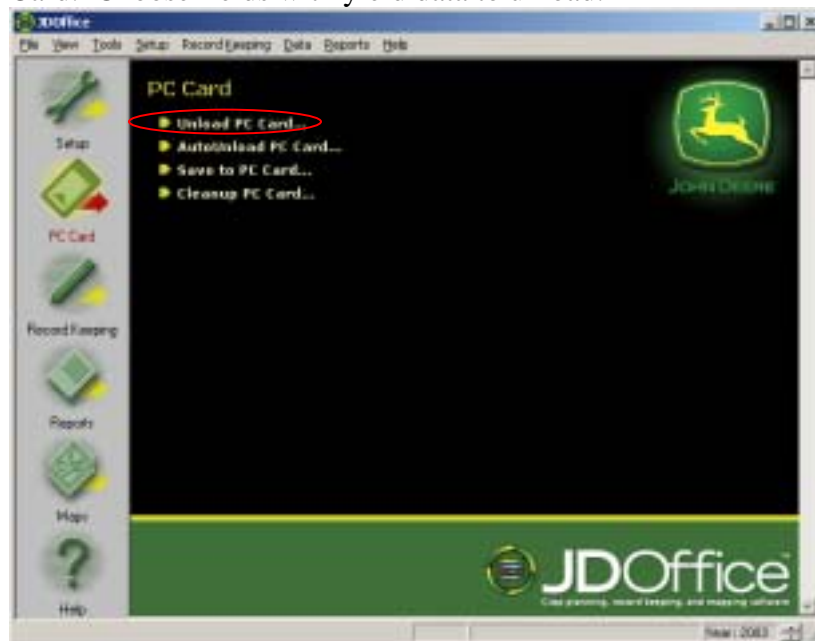
## Exporting the Yield Data Using JDOffice

### 1. Data Format On Hard Drive



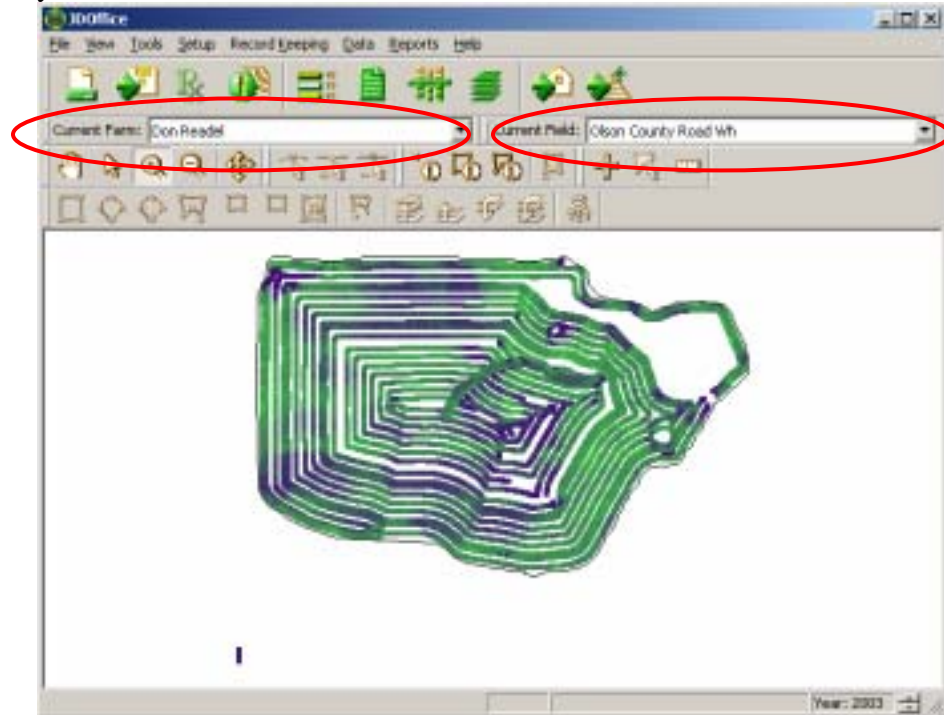
### 2. Start program *JD Office*.

- From the *PC Card* menu on the left of the screen choose Unload PC Card. Choose fields with yield data to unload.



- From the *Maps* menu choose Field Maps.

- c. In the Field Maps screen choose an appropriate farm and field that has yield data.




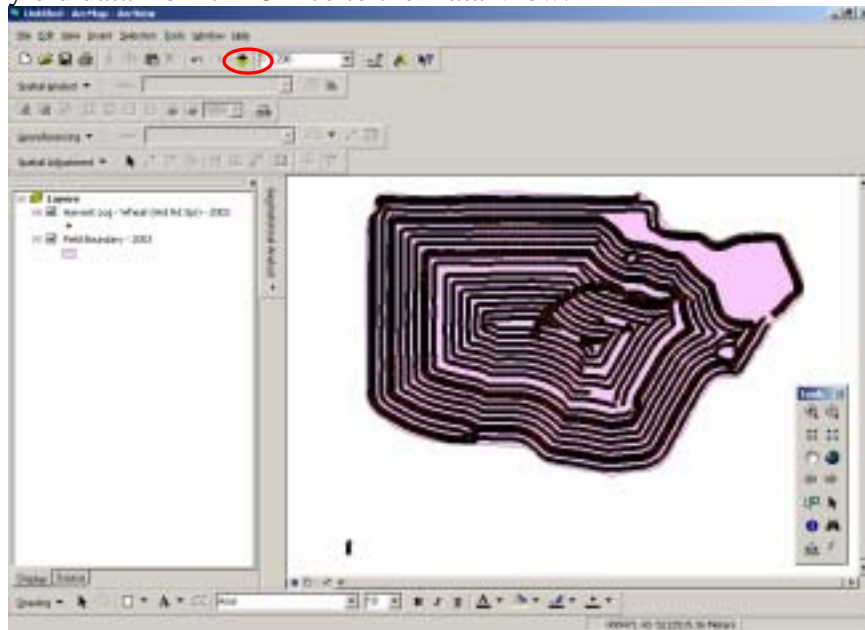
- d. Once the appropriate field is chosen a *Layers* box will appear. In this box add yield points and field boundary using the *Add* button. (Field boundary is not required but helpful)



- e. From the *File* menu in the top left corner of the screen chose *Export* then *Layers as Shape Files*. When prompted choose the destination of the Layers.



4. Set the Data Frame properties as follows:
  - a. Right-click on the screen in the data frame to open the Data Frame Properties window.
  - b. Click the “General” tab and set the Map Units and Display Units to “Meters”.
  - c. In the “Select a Coordinate System” window choose:
    - i. Predefined
    - ii. Project Coordinate System
    - iii. UTM
    - iv. NAD 1983
    - v. Zone 14N
  - d. Click “OK”.
5. Click the “Add Data”  button to add the exported field boundary and yield data from JD Office to the Data View.



6. Before exporting the yield data the attribute table may need to be edited to get rid of inaccurate yield points.

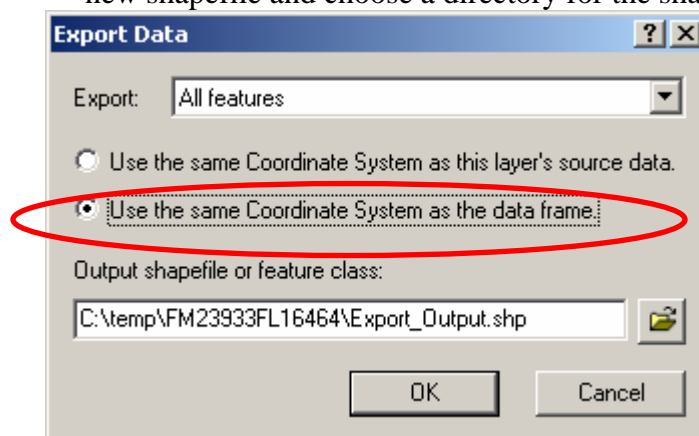
FID	Shape	WETWEIGHT	YIELD	MOISTURE
0	Point	94620.83	1576.78	11.55
1	Point	112934.56	1881.93	11.55
2	Point	0	0	-21474836
3	Point	0	0	-21474836
4	Point	0	0	-21474836
5	Point	0	0	-21474836
6	Point	0	0	-21474836
7	Point	0	0	-21474836
8	Point	0	0	-21474836
9	Point	0	0	-21474836
10	Point	0	0	-21474836
11	Point	0	0	-21474836
12	Point	0	0	-21474836
13	Point	0	0	-21474836
14	Point	0	0	-21474836
15	Point	0	0	-21474836
16	Point	0	0	-21474836

None of these points are accurate so they must be deleted

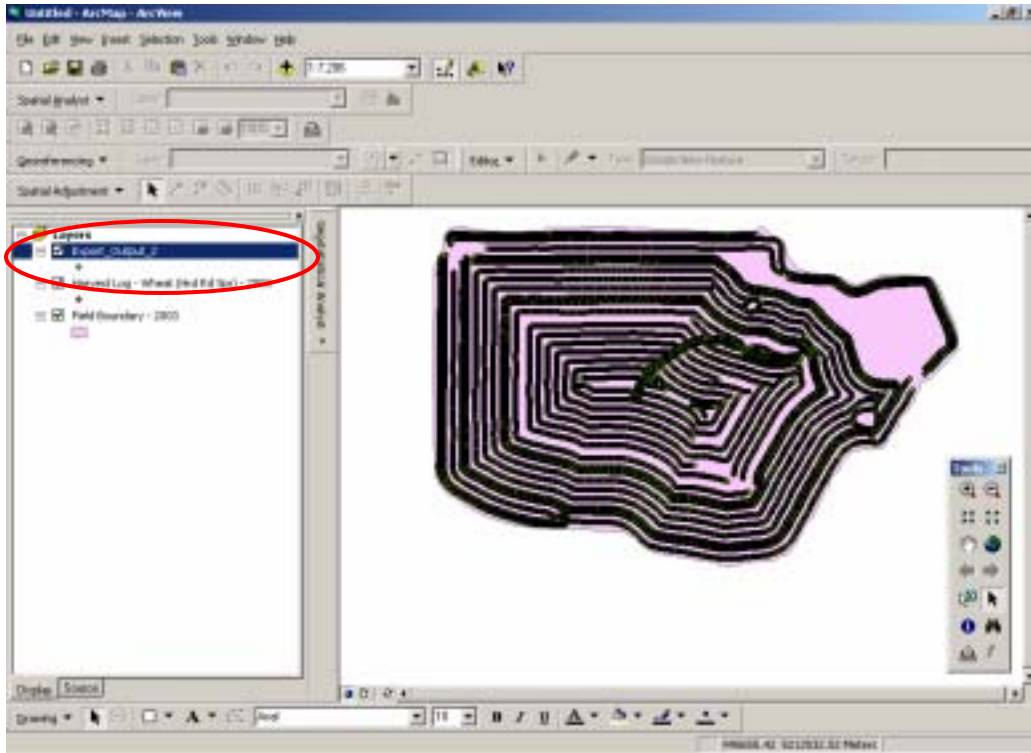
### Exporting the Yield Data and Field Boundary data as a Shapefile

(Note: the yield data and field boundary data must be exported to convert it to a shapefile and added as a shapefile before interpolating into a contour map.)

7. Right-click on the Event Layer name in the table of contents and choose “Data” and then select “Export Data”.
  - a. In the “Export Data” window:
  - b. Choose “Use the same coordinate system as the data frame”. Name the new shapefile and choose a directory for the shapefile.

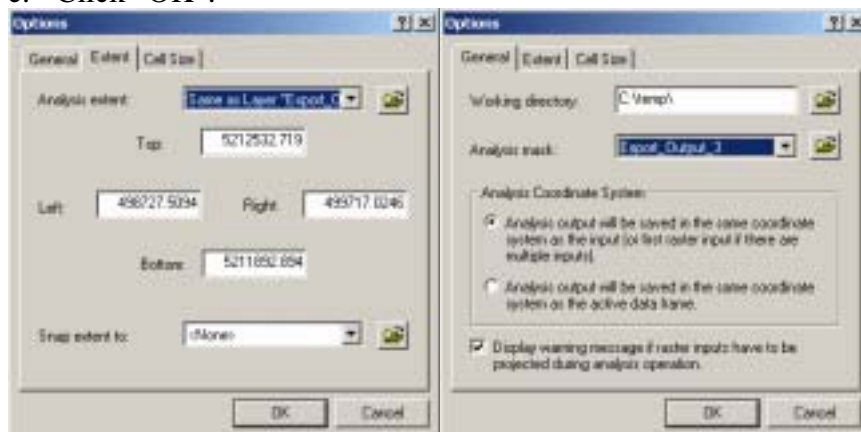


- c. Click OK. Do this for both the yield data and field boundary.
8. When asked to add exported data to view as a layer choose yes.

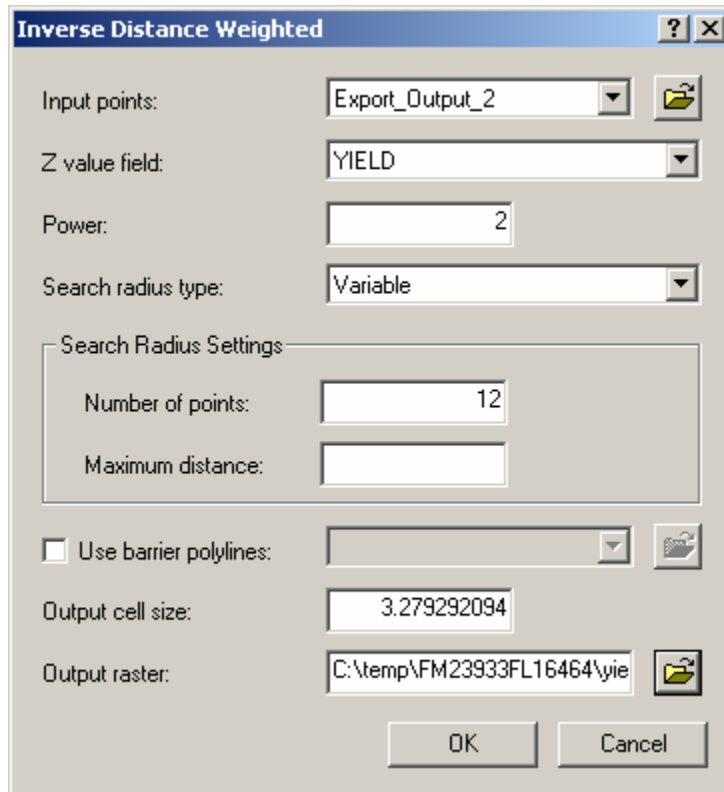


### Interpolating Between Points

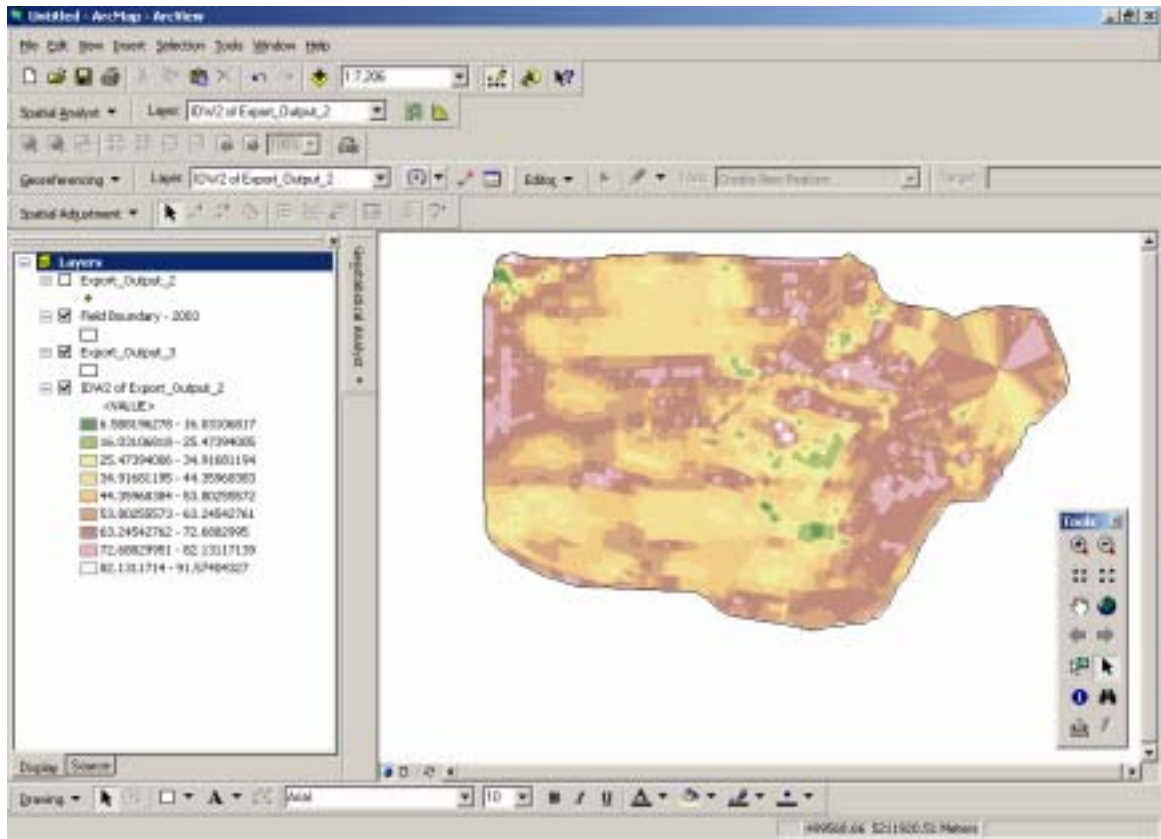
9. From the View pulldown menu choose “Toolbars”, and then select “Spatial Analyst”.
10. Set the contour map extent before performing interpolations:
  - a. Choose “Options” in the Spatial Analysis Toolbar
  - b. In the “General” tab set the analysis mask to the exported field boundary layer.
  - c. Click the “Extent” tab.
  - d. Use the “Analysis Extent” pulldown to set the extent to the “Same as Layer: Exported Field Boundary”
  - e. Click “OK”.



11. In the Spatial Analyst window choose “Interpolate to Raster” and then select “Inverse Distance Weighted”.
12. In the Inverse Distance Weighted window”
  - a. Select the desired layer.
  - b. Choose a desired Z Value Field (Yield\_Mass\_D).
  - c. Set the cell size as desired. (Note: The smaller the cell size, the longer it will take the computer to make the interpolated grid map.)
  - d. Choose a name for the output raster file, choose ESRI Grid, and choose a location to

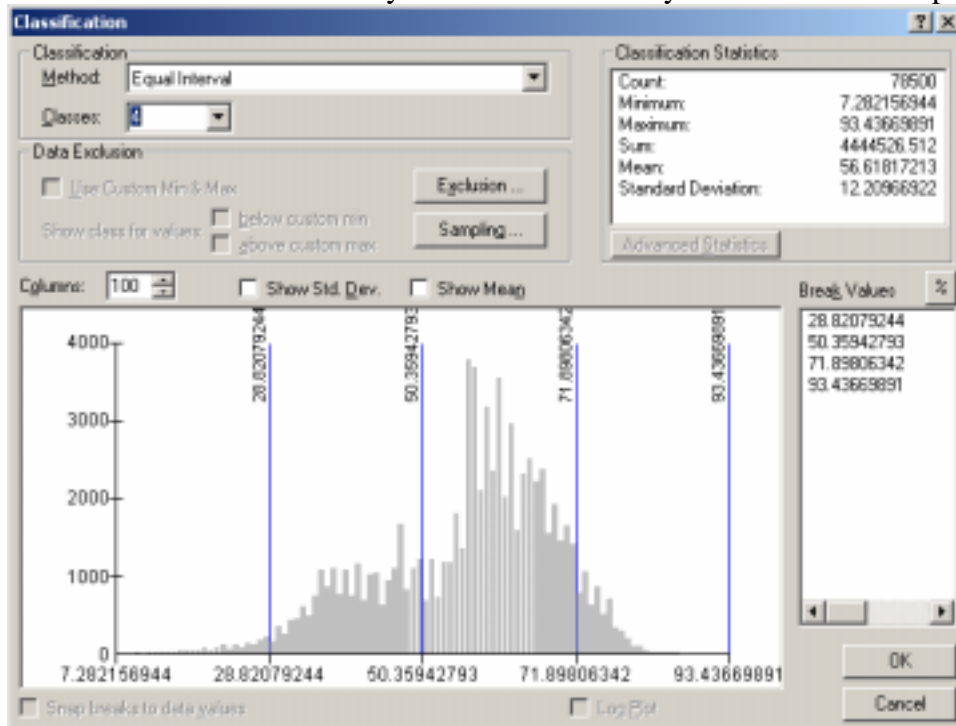


13. Click “OK” to interpolate and add the contour map to the view.

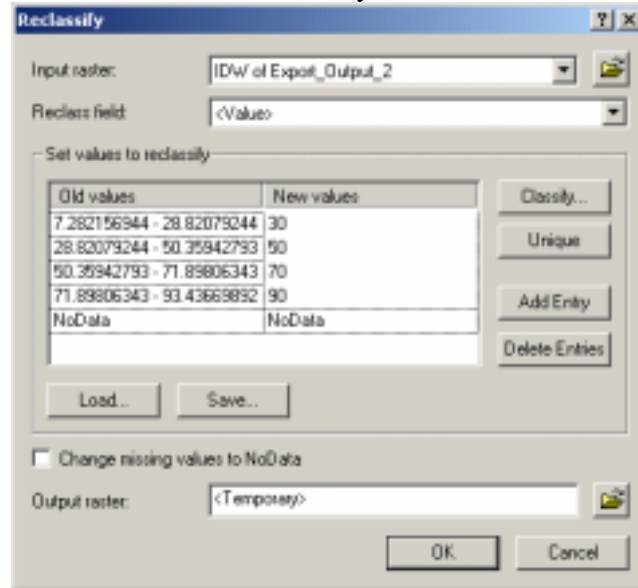


## Reclassifying contour maps

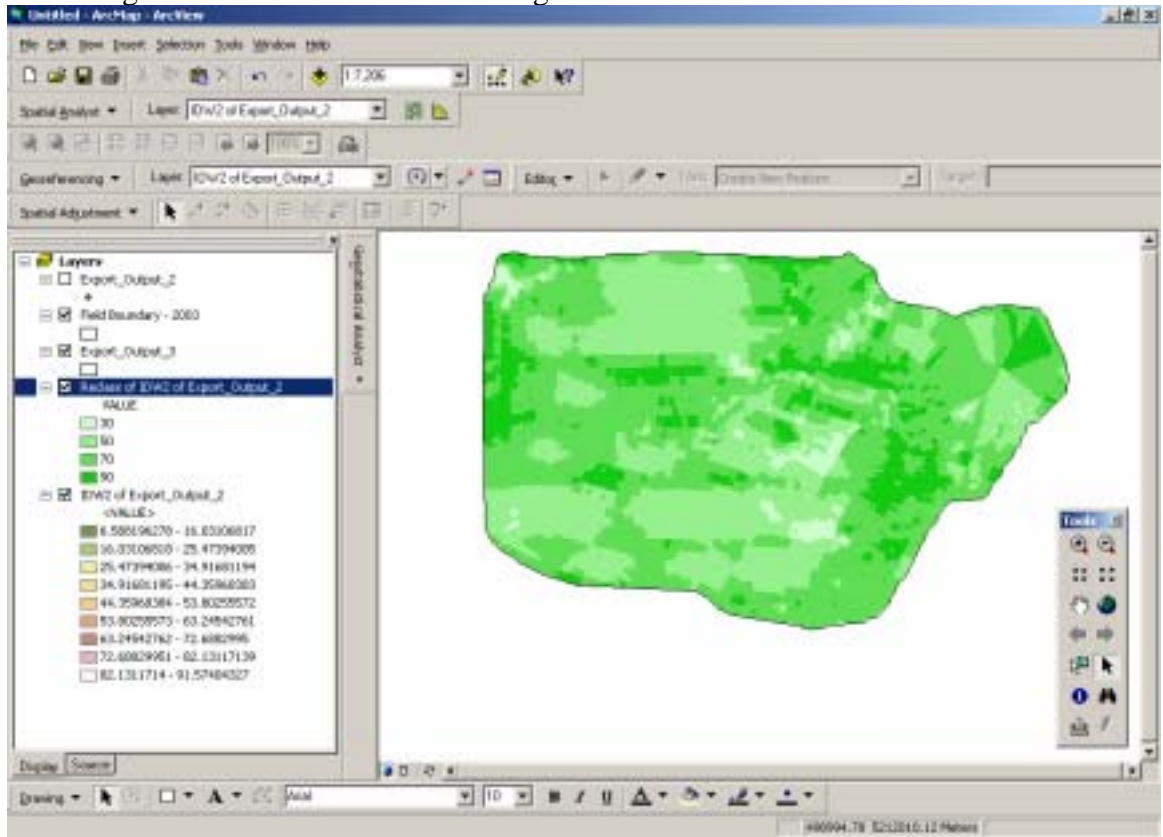
14. From the Spatial Analysis toolbar choose “Reclassify”. In the Reclassify window click the “Classify” window. A Classify window will be displayed.



- In the Classify window, choose “Equal Interval” method and set the classes to 4. Click “OK” to return to the Reclassify window.

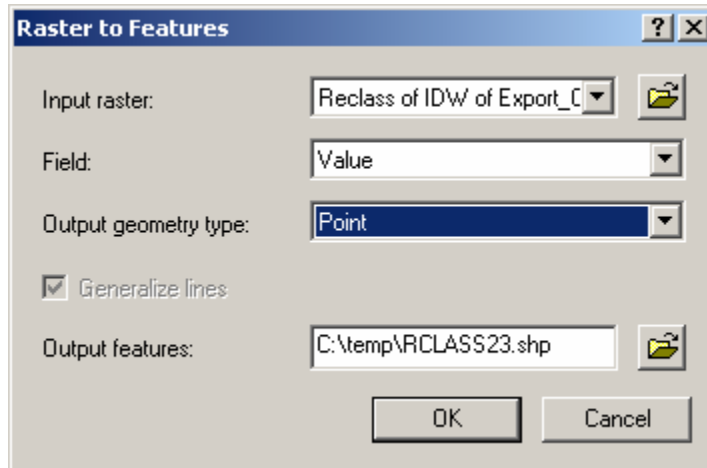


- Change the new values to desired ranges and click “OK”



This can be displayed in different colors by right clicking on the layer name in the table of contents and choosing “Properties”. Select “Classify” and choose a desired color ramp. Click “OK”.

17. Save the reclassification as a new and permanent grid by right-clicking the Reclass of the IDW of Sunflower title in the table of contents, choose “Make Permanent”. Choose a desired directory and provide a name for the new grid.
18. The grid can be converted to a polygon or point shapefile by choosing “Convert > Raster to Features” in the Spatial Analysis toolbar. Do not generalize lines.



19. Select a directory for the new shapefile, provide a name and Click “OK”.