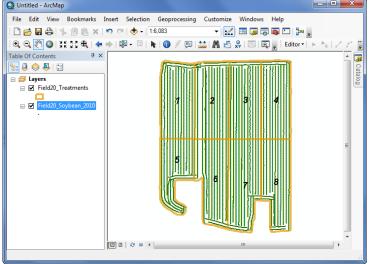
## **Tutorial Set 2: Data interpolation**

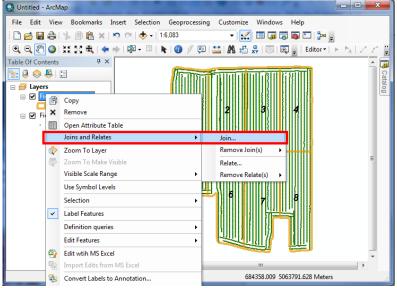
## Exercise Site20\_2-5 Summarizing points data within polygon

Learning objective:Obtaining descriptive statistics of yield under different agriculture<br/>treatment plotsTechniques:Spatial JoinData Source:Dataset2

1. Bring the two layers *Field20\_Treatments.shp* and *Field20\_Soybean\_2010.shp* to ArcMap.



- 2. Label the block ID of *Field20\_Treatments* (layer **properties>Labels**). Label field: **Block**
- 3. In Table of Content, right click on *Field20\_Treatment* and go to Joins and Relates > Join ...



4. In **Join Data** dialog window, set parameters as:

Join Data
Join lets you append additional data to this layer's attribute table so you can, for example, symbolize the layer's features using this data.
What do you want to join to this layer?
Join data from another layer based on spatial location 🔻
1. Choose the layer to join to this layer, or load spatial data from disk:
🐼 Field20_Soybean_2010 🔽 🚰
<ol> <li>You are joining: Points to Polygons Select a join feature class above. You will be given different options based on geometry types of the source feature class and the join feature class.</li> </ol>
Each polygon will be given a summary of the numeric attributes of the points that fall inside it, and a count field showing how many points fall inside it. How do you want the attributes to be summarized?
V Average V Minimum V Standard Deviation
Sum Variance
Each polygon will be given all the attributes of the point that is closest to its boundary, and a distance field showing how close the point is (in the units of the target layer).
Note: A point falling inside a polygon is treated as being closest to the polygon, (i.e. a distance of 0).
3. The result of the join will be saved into a new layer.
Specify output shapefile or feature class for this new layer:
Yield_Treatment.shp
About joining data OK Cancel

- 5. Click OK.
- 6. A new layer *Yield\_Treatment* is added to **Table of Content**. Right click on this layer, and go to layer **Properties -> Symbology** to show the values of the field *Avg\_YIELD*.

General Source	ins & Relates Ti Selection Display Symbol						
Show: Features Categories Quantities Graduated colons — Graduated symbols — Proportional symbols	Draw quantities using color to s Fields Value: Avg_YIELD Normalization: none Color Ramp: Symbol Range	Classfication Natural Breaks (Jenks Classes: 5 V Class Label	Image: second system         Image: second system           Image: second system         Avg_VIELD           Image: second system         5.70 - 5.79           Image: second system         5.80 - 6.06           Image: second system         6.25           Image: second system         6.26 - 6.35	1	2	3	
	5.701807-5.786519 5.786520-6.064916 6.04917-6.245679 6.245680-6.350594 6.350595-7.394327	5 70 - 5 79 5 80 - 6.06 6 0.7 - 6.25 6 26 - 6.35 6 36 - 7.39	■ 6.36 - 7.39 □ ☑ Field20_Treatments □ ☑ Field20_Soybean_2010	ſ	6	7	

7. Label the block ID of *Field20\_Treatments* (layer properties>Labels). Label field: Block