

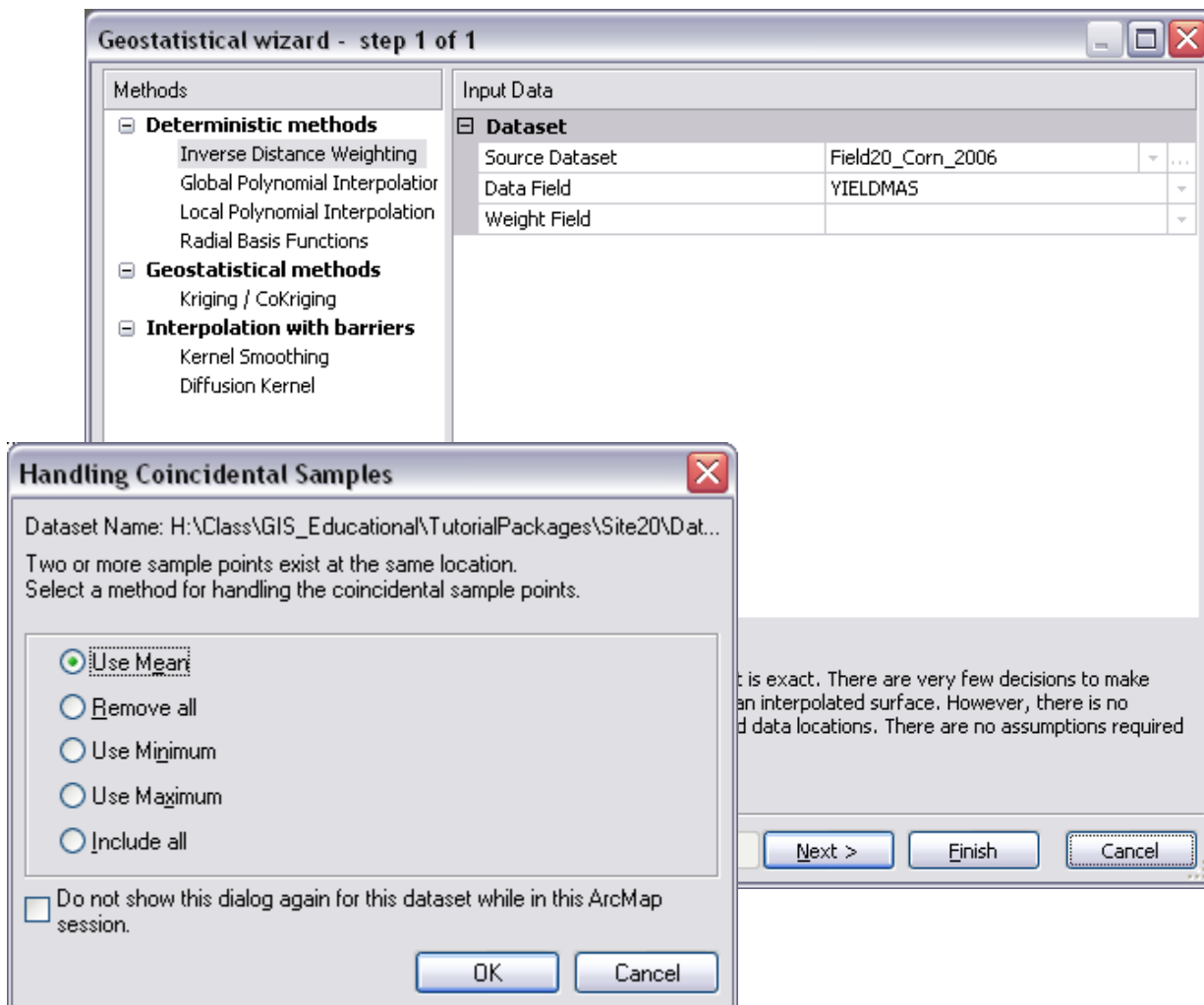
## Tutorial Set 2: Data interpolation

### Exercise Site20\_2-2 Interpolating crop yield data

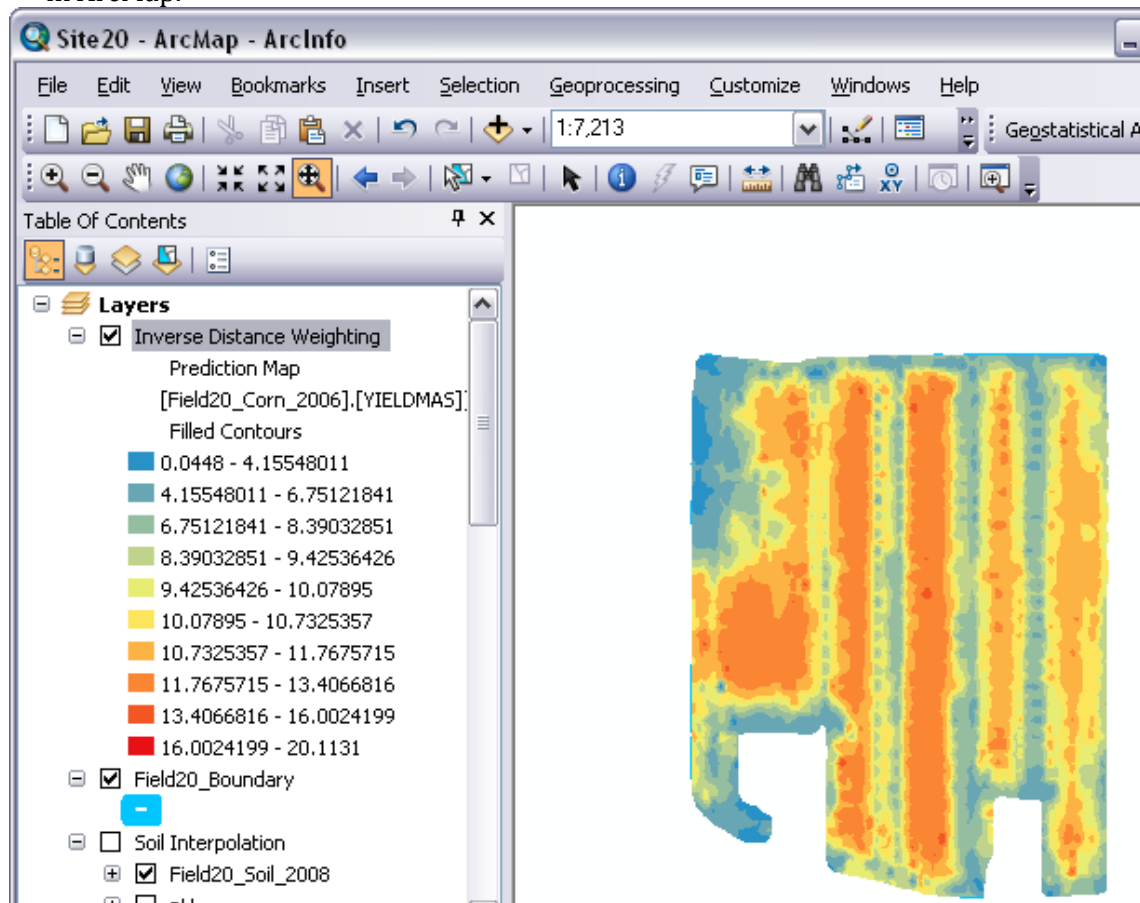
**Learning objective:** Generating yield variability maps: corn, soybean, and wheat  
**Techniques:** Geostatistical Analyst – Inverse Distance Weighting  
**Data Source:** Dataset2

**Part 1:** Generating crop yield maps using the Geostatistical Method – Inverse Distance Weight

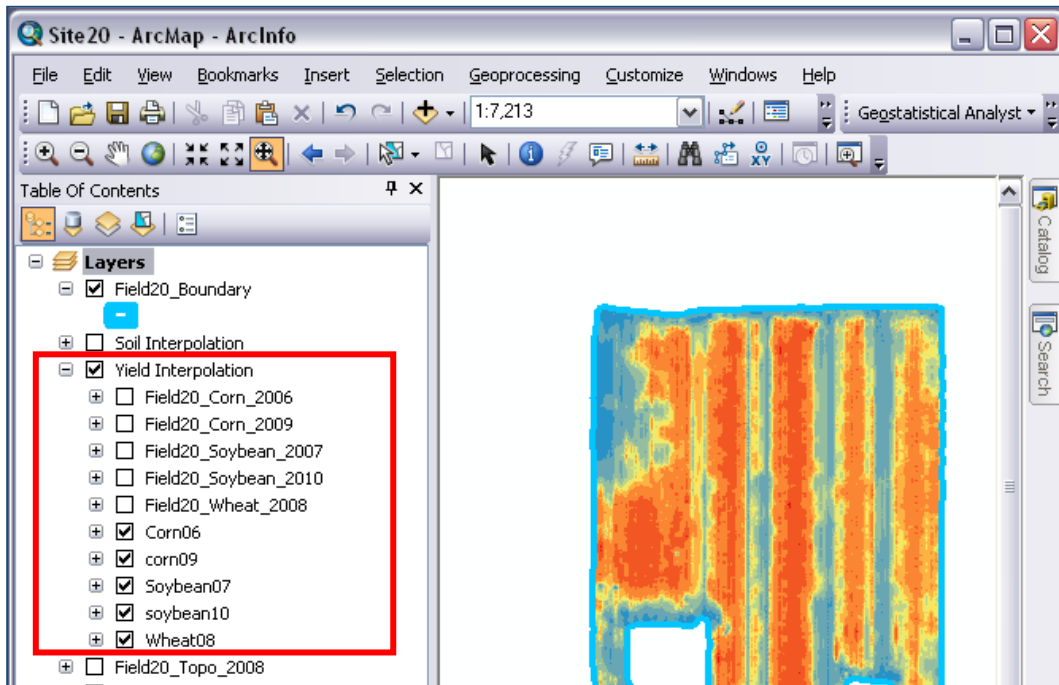
1. Open previously saved project.
2. In **Geostatistical Wizard**, choose **Inverse Distance Weighting** method.
3. Source Dataset: **Field20\_Corn\_2006**.
4. Data Field: **YIELDMAS**.
5. Click **Next**.
6. In **Handling Coincidental Samples**, choose **Use Mean**, click **OK**.



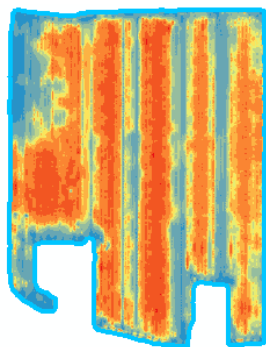
7. In **Geostatistical Wizard – Inverse Distance Weighting** – Step 2 of 3, set **Neighbourhood** type to “**Smooth**”.
8. Click on **Finish**. A temporal interpolated 2006 Corn Yield map is added to **Table of Contents** in ArcMap.



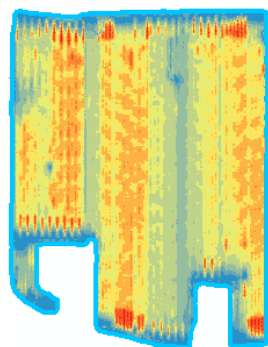
9. Permanently save this Yield map by right clicking on the **Inverse Distance Weighting** layer > **Data > Export to Raster**.
10. Store this map as “**Corn06**” in the folder Dataset2.
11. Once done, right click on **Inverse Distance Weighting** layer and then remove it from **Table of Contents**.
12. Repeat steps 1 to 11 to generate other yield maps using datasets **Field20\_Corn\_2009**, **Field20\_Soybean\_2007**, **Field20\_Soybean\_2010**, and **Field20\_Wheat\_2008**.
13. Browse through Dataset2 folder in ArcCatalog. There should be five new rasters: **Corn06**, **Corn09**, **Soybean07**, **Soybean10**, and **Wheat08**. Drag and drop them to **Table of Contents** under the group “Yield Interpolation” in ArcMap.



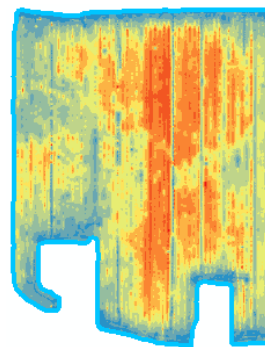
14. Results of the five interpolated crop yield maps (unit: ton/ha)



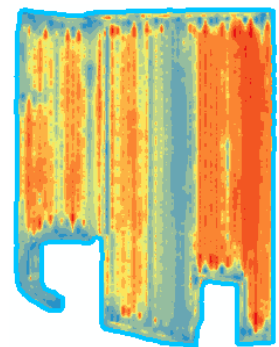
Corn Yield 2006



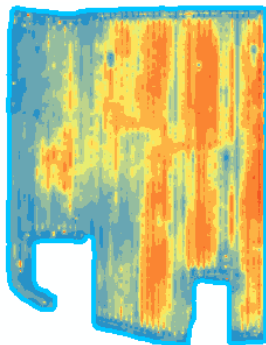
Corn Yield 2009



Soybean Yield 2007



Soybean Yield 2010



Wheat 2008

15. Save the project.