



Post VESPER tool v1.6 – User instructions

The Post VESPER tool is an ArcGIS extension that automates the process of converting the file output by the VESPER kriging program (<http://www.usyd.edu.au/su/agric/acpa>) into raster format in ArcGIS.

Two rasters created correspond to the predicted values and the standard error of the predictions. The tool will optionally categorise the rasters into equal sized classes, apply a colour ramp and create a layer file.

System requirements

- ArcGIS version 9.3
- 3D Analyst or Spatial Analyst extensions for ArcGIS
- Microsoft .NET Framework version 2
- Microsoft .Net support for ArcGIS (installed by default by ArcGIS 9.3 installation program).
- The Vesper program is available from the website of the Australian Centre for Precision Agriculture (ACPA) at the University of Sydney (<http://www.usyd.edu.au/su/agric/acpa>).

Last update

14 January 2009

Installation

Installation of the tool is in two main steps.

1. Install the necessary files

- Locate and run the setup.exe file
- Step through the installation program, accepting the default settings

2. Add the tool to the ArcMap user interface.

- Run ArcMap
- From the **Tools** menu, click **Customise**
- Click the **Commands** tab
- In the lower section of the window set **Save in:** to be Normal.MXT
- Locate and highlight **Precision Agriculture** in the **Categories** box
- Locate the **Post VESPER Tool** in the commands box and drag this tool to a blank area on any toolbar.
- Click **Close** on the Customise dialogue window

Using the Post VESPER tool

ArcMap must be in **Data View** (not Layout View) or the Post VESPER toolbar button will be disabled. When the toolbar button is clicked the window shown in Figure 1 should appear.

The following fields need to be entered:

- The kriged output file to be processed.
- The output directory in which the rasters are to be created.
- Tick boxes allow you to select which (or both) rasters to be created. The name entered for each raster (must conform to ESRI grid name length limit of 13 characters)
- The Set Symbology tick box enables the classification (into equal sized classes) and symbolisation of the rasters. Symbolisation uses the HSV Algorithm for ramping colours between the high and low values.
- The 'Save as Layer File' determines whether a layer file is created for each raster

The screenshot shows the 'Post VESPER tool' dialog box. The title bar includes the text 'Post VESPER tool' and standard window controls (minimize, maximize, close). The dialog is divided into several sections:

- Process VESPER Output file**: Includes a 'Log' button.
- Input file**: A text field contains 'C:\Test\PostVesper\kriged_Berry_wt.txt' and a 'Browse...' button.
- Output Rasters**: An 'Output Directory' field contains 'C:\Test\PostVesper\Output\' and a 'Browse...' button.
- Create Prediction Raster**: A checked checkbox and a 'Name' field containing 'BerryWt'.
- Create SE Raster**: A checked checkbox and a 'Name' field containing 'BerryWtSE'.
- Coordinate**: A field containing 'GDA_1994_MGA_Zone_54' and a 'Select...' button.
- Set Symbology**: A checked checkbox.
- Classified Symbology**: A 'Categories' spinner set to '7', two color swatches labeled 'High value' (dark blue) and 'Low value' (red), and a checked 'Save as Layer File' checkbox.
- Buttons**: 'About', 'Process', and 'Close' buttons are located at the bottom.

Figure 1: The Post VESPER Tool form

Maintenance

This tool was originally developed as an extension for ArcMap 9.1 in July 2006, to assist with Precision Viticulture research in June 2006. For queries, please contact David Gobbett from CSIRO Sustainable Ecosystems.

Notice

© CSIRO Australia 2007

The notes and software described here are based on a number of technical, circumstantial or otherwise specified assumptions and parameters. The user must make their own assessment of the suitability for use of the information or material contained in or generated from these notes. To the extent permitted by law, CSIRO excludes all liability to any party for expenses, losses, damages and costs arising directly or indirectly from using these notes and software tools.

David Gobbett, CSIRO Sustainable Ecosystems

Phone +61 8 8303 8741

Email David.Gobbett@csiro.au

Web <http://www.csiro.au/products/PrecisionViticultureSoftware.html>