Virtual Grower 3.0 Tutorial #5: Plants

(0:02)   Welcome to Virtual Grower tutorials, an online series designed to help users navigate different aspects of the Virtual Grower software.

(0:12)   In this tutorial, we will explore the Plants section of the Design menu. We'll continue the simulation we have been building throughout other tutorials. Under the File menu, select 'Load'. Choose your .gsf file and click 'Open'. Click on the 'Plants' button under the Design section.

(0:35)   This section allows you to select groups of plants that are grown in areas of your greenhouses in order to simulate their growth and development under your chosen environmental conditions. Similar to previous versions of Virtual Grower, you are able to define multiple plant assemblages; however, as you create those groupings, they are not linked to one specific greenhouse. Later on, under the Output Section, you are able to link one plant assemblage to as many greenhouses as you require, or mix and match multiple groupings to several greenhouses.

(1:10)   The majority of this screen is inactive until you press the 'Add New Plant List' button. Once you do so, a default Plant List is populated in the large white field on the left side. This field contains a list of all the plant groups you create. You can change the default name to one that more accurately describes your needs by highlighting the name field and entering in the new name. The plant list you are working on from the list should be highlighted in blue.

(1:38)   Right-clicking the name of a plant group in the list gives you the option to either copy or delete that list. Choosing 'Make Copy' transfers all of the plant selections to a new group. If you no longer need a plant list you have created, right-click and choose 'Delete'.

(1:55)   Virtual Grower 3.0 contains data for the growth and development of 40 plant species, listed in the text field titled 'Available Species'. The plants are categorized by their common name, with scientific names in parentheses.

(2:10)   You may choose species for your plant list by clicking on the desired plant name, which highlights the name in blue. Then click the 'Add>>' button. This moves the selected species to the 'Selected Species' text field. Additional species can be added to your list by repeating this process.

(2:28)   If you have chosen a species that you no longer need in your plant list, you can remove it by clicking on the name in the 'Selected Species' text field, which highlights it in blue, and then pressing the '<<Remove' button. That species is removed from your plant list and reappears under the 'Available Species' heading.

(2:47)   As you go through and select species, the Information section of the page updates. Here, you will see pictures and additional information that helps take some of the guesswork out of growing and simulating these plants. Photoperiods, optimal temperatures, and starting sizes

are listed, as well as short descriptions of each plant. Links to additional websites are noted, if you would like to know more about each one.

(3:12)   This completes the Plants section of the Design menu. You can save your work at any time by going to the File menu. Other sections of the Design menu are explored in associated tutorials in this series. Additional tutorials addressing the Output and Predictions/Forecasts section of the program will help you generate estimates of plant size and time to flower, as well as predict start times for each species based on your environmental conditions and target finish dates.

(3:42)   Any time you need more assistance, you can go to the Help menu. There, you will find our email address, USDA-ARS@utoledo.edu.