COMPUTER-BASED ANALYSIS SYSTEMS

SKYELEAFv2 SYSTEM SPECIFICATIONS

PC REQUIREMENTS:

PC running Windows XP (Service Pack 2 or above) or Windows Vista
Current Windows upgrades installed, including the .NET Framework 3.5 program installation feature
Spare USB port for video camera or scanner (if required)
NOTE the software is designed to operate faster if the PC has a dual or quad core microprocessor

IMAGE CAPTURE REQUIREMENTS: Any or all of the following may be used:

'Live' video camera system, field or laboratory system or a USB video camera with drivers fully installed. The camera must have DShow or Direct Show, a feature which can be accessed directly from the SkyeLeafv2 software, without translation required from the camera manufacturer's own software.
Flatbed scanner system - USB scanner with drivers fully installed
Digital camera with PC cable or memory card reader to transfer photographs or images to the PC

SYSTEM OPTIONS: Choice of four systems:

Stand alone software for the analysis of saved image files. Post analysis of leaf images taken using a standard digital camera in the field. Files can be analysed in situ on a laptop PC or can be analysed later in the laboratory or office. It is important to remember to include a scaling object in each photograph.
Field portable system for "live", non destructive, in situ measurements. This system requires a laptop with harness and hand held leaf clamp with mini USB video camera for instant analysis in the field. One time calibration only.
Laboratory system using a PC with light box and USB video camera. Although this is a destructive method of analysis, it gives the most flexible approach for analysis of a wide range of leaf sizes, colours and varieties. Lighting of leaves to be analysed is fully adjustable, allowing easy determination of different colours, shades and diseased or damaged areas on the leaves.
PC system with a flatbed scanner. A standard office flatbed USB scanner can be used to capture images Directly into SkyeLeafv2 for analysis.

FEATURES:

SkyeLeafv2 makes fast and accurate measurements of leaf images, plus accumulated measurements of whole sessions of an unlimited number of images. One leaf image can contain single or multiple leaves, as appropriate.
SkyeLeafv2 runs in demo mode for 15 minutes (unlimited runs) with some features disabled until the software Is purchased and unlocked
Automatic measurements are made of number of leaves, the total area of all leaves, the total length, Breadth and perimeter of all leaves, the total area of all the secondary (diseased / damaged areas), the maximum length and breadth of the largest leaf.
The user defines the part of the image to be analysed by using a Threshold function of intensity in the Red, Green and Blue light planes. Single or combinations of light colour planes can be chosen.
Secondary threshold for diseased / damaged areas can be set separately as required.
Dual view window shows original leaf image and the threshold settings simultaneously. Easy threshold adjustment using slider bars in main window.
Automatic pixel size calibration feature (for live digital camera options only). SkyeLeafv2 scales the size and aspect ratio of the pixels in the current image with the use of a Calibration Disk of 3cm or 10cm, provided with each copy of the software.
Manual calibration feature for saved images / photographs, or for live images of very large or very small Leaves.
Remove small objects function to eliminate errors due to soil / leaf debris included in the leaf image
Print report feature includes original and threshold images, results and user notes.
Results can be saved in XML or CSV formats, as single files or session results. Files can be imported to continue a session at a later time.