

University of Tennessee Electronic Diagnostic and Recording System



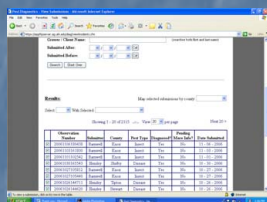
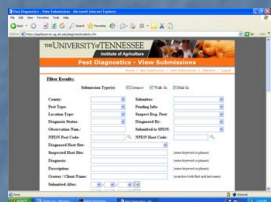
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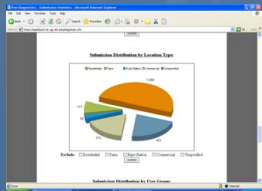
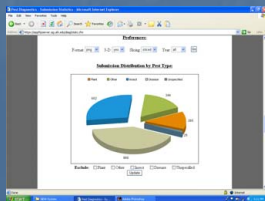
The original Distance Diagnostics (DD) system utilized Lotus Notes Domino Server to push web pages. The system used SQL 2000 for storage of login identification and passwords for system users. However, since system initiation, it has been difficult to manage and is lacking in various requirements for NPDN.

Development of an updated DD system was begun in late 2005. The new web based system allows users to easily search for submitted samples and includes specifications required by NPDN.

The updated DD system utilizes Adobe Macromedia Coldfusion MX7 internet services, Microsoft SQL 2005, COMODO authentication, PHP server software, and two Dell 4600 PowerEdge servers. The sever operating system is being upgraded to Microsoft Windows 2003. This allows for the creation of a digital image library with associated site, crop, and pest/disorder data that may be used in educational programs, assist with diagnosis, data mining, and developing of epidemiological charts. Filters allow for searching of specific fields within records.



A statistics page provides information in various graphical and text based formats for reporting purposes



The COMODO provides a secure socket layer (SSL) which generates an encrypted key for 128-bit authentication. The authentication process shifts web browsers from the traditional "http" universal resource locator (URL) to the encrypted URL which begins with "https." It creates an encrypted link between web server and a web browser. The link ensures that all data passed between the web server and browser remains private and secure. Users recognize this level of security by the closed padlock icon which appears in their web browser.

Currently, the system is a closed password protected system available to Extension personnel and Tennessee Department of Agriculture nursery inspectors. The system will soon accommodate submissions by Tennessee Master Gardeners.

Unique sampling numbers are assigned to each submitted sample and PHP server aids Coldfusion software by generating barcodes as requested by users. Barcodes may be generated by county personnel in the event that requests may be made by specialists to forward samples for further diagnosis. Barcode information may be printed on sticky labels or plain paper for mailing purposes.

The system uses Google Maps and MS-Virtual Earth to plot records previously searched when generating geographical maps. Records with no GPS coordinates are placed within center locations of counties of origin and samples with GPS coordinates are placed at their GPS coordinate position within the map.

