THE EVOLUTION OF WEEDSOFT. Brady F. Kappler and Lynn B. Bills, Extension Educator and Software Designer, Department of Agronomy and Horticulture, University of Nebraska, Lincoln, NE 68583

   From it's NebraskaHERB roots in 1992 to the latest 2002 version WeedSOFT has evolved into a robust and useful computer program. WeedSOFT is a decision support system (DSS) designed to assist growers, agronomic professionals and extension personnel in making both proactive and reactive weed management decisions. This comprehensive, and ecologically sound, tool helps farmers in every step of their weed management decision. WeedSOFT provides the treatment information according to specific field conditions while factoring in economic and environmental principles. The program considers early season soil applied treatments, control of mid-season infestations, or compares treatments requiring additional costs for herbicide resistant crops.
   In 1992 the University of Nebraska unveiled the DOS based NebraskaHERB 1.0 which while revolutionary, could only be used in soybeans for postemergence recommendations. From 1993 to 1995 the program progressed to version 4.0 and added corn, sorghum, wheat, and sugarbeet postemergence recommendations along the way. In 1996 the NebraskaHerb name was changed to WeedSOFT. This change reflected a new program that was Windows compatible and now also provided pre-emergence recommendations in addition to the postemergence recommendations. Also with WeedSOFT 1.0 two new modules were added in addition to the "advisor" recommendation module. EnviroFX and WeedView were new modules that brought expanded information to the user. EnviroFX provided the user with environmental information and leaching potential of certain herbicides based on the soil characteristics. WeedView provided pictures and basic descriptions of many common weeds found in Nebraska. In 1997 WeedSOFT 2.0 was released and added a fourth module known as MapView. MapView allowed the producer to see specific groundwater vulnerability threats from herbicides in his particlular location. In 1999 work began on regionalization of WeedSOFT to the Midwest rather than just Nebraska. A USDA grant provided the necessary startup funds to begin the development of other state version of WeedSOFT. In this initial phase Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, and Wisconsin were the participating partners. In 2000 WeedSOFT 5.0 was for the first time released on CD instead of floppy disks. In 2001 the design platform was changed to Visual Basic. In addition, a web page was developed (http://weedsoft.unl.edu) to provide information, technical support, and deliver updates to users. In 2002, a new yield loss algorithm has been developed for WeedSOFT 2002 based on field validation research at Nebraska and other states. Also the program will include an error logging function for tracking errors and assisting in technical support. The regional project will also be entering the distribution phase with Illinois, Kansas, Missouri, and Wisconsin releasing their own "state" version for the first time. In the future, the core program will continue to be developed and improved for utility and ease of use. Also Indiana and Michigan will release their state versions in 2003. The goal is to dramatically increase the distribution of WeedSOFT and in the future more states may be added to the regional project.