**Expert system weeds out undesirables**

Computerization in farm offices still lags behind other sectors of the economy, but computers

by Hugh Maynard

For production records, ration balancing and tractor function monitoring, computers are becoming indispensible adjuncts of the farm management service industry.

An area of increasing use is the application of expert systems, diagnostic software that enables farmers and their advisors to identify and choose solutions for a wide range of farm problems. Think back to the last time that you called a large institution that has a computerized telephone/answering system: "Hello, this is Eastern University. Bonjour, ici l'UniversitŽ de l'Est. For service in English, press 17, pour service en francais, appuyer le 19." Each successive request presents a choice, each responding command brings the caller closer to the intended party (or automated answering machine, as is often the case . . . "Sorry, . . . I am unable to take your call . . . as is often the case.)

Expert systems work in much the same manner, except that a set of circumstances is presented to which the computer software provides choices as it attempts to identify and then offer remedies for the problem. An expert system that identifies weeds in their early growth stages is the latest addition to the growing number of rm management

Making the expert system accessible to the less-than-experts, SIPO presents images and graphic symbols on the computer screen, enabling easier comparison between dicotyledon weed seedlings

The objective is that through early identification, a farmer can make better decisions regarding control. By knowing what weeds are in a field and emerging in what numbers, decisions can be made on whether control measures will be necessary to avoid crop yield reductions, and if so, through what means. Advance knowledge of an impending weed problem may allow the farmer to 'nip it in the bud' through cultivation, or at least make more efficient use of herbicides through timely and appropriate application.several species of seedling that likely appear very much the same in the early stages of growth. The program only provides the means with which to identify a weed and does not furnish the measures to rectify any potential problem.Ø

The software program is intended mainly for use by agricultural professionals such as crop advisors and extension personnel; it is,

however, readily usable by anyone interested in weed indentification without any specialized training or vocabulary requirements.

The software is available only in French and for MacIntosh computers. Versions in English and for IBM and compatible PCs are presently being developed.it attempts to identify and sometimes The function of the system is to assist farmers toweed through early identification

The intended results are both financial savings for the farmer and more environmentally benign control practices.s are presently being developed, as are similar packages for plant diseases and crop insects.