TOOLS T 11	DSS (Decisions Support Systems)
	Theoretical

Date (26/05/2010)

WHAT IS…	Decision Support Systems (DSSs) are - almost exclusively – computer-based data processing mechanisms where the end-user has to 'feed' the system with appropriate input data. In response, the computer returns the results of its own calculations, which should be useful in the decision making process in pest control (or elsewhere). Remember, **COMPUTERS NEVER THINK!** The usefulness (or complete uselessness) of DSS depends on two factors: the quality of input data and the quality of the background algorithms. The first factor depends on the end-user, whereas the second is the responsibility of the program developer.
WHY	DSS can act as an important tool for making 'good decisions'. For a long time 'good decisions' in farm management (and in pest control) equalled 'economic decisions' - to be more cost-effective and raise profitability was one of the main reasons for the creation of DSS. However, these days more attention is focused on the incorporation of additional (strategic) aspects besides the original (tactical) ones. Such strategic aspects can be diverse, from taking resistance management into account, to the consideration of influence of pesticide applications on non-target organisms. In general, the competence of DSS has increased. The development of information technology points towards the integration of different tasks into a complex and in most cases web-based computer service for farmers. Such a platform can serve as a comfortable, fast and reliable aid in everyday decision making in pest control as well as in managing more general farm administration tasks. You may be confronted by a reluctance to accept DSS - these tools are meant to raise competitiveness but their use is not essential. Nevertheless when farmers, directly or indirectly, have to compete in a global market environment, it is questionable if they can stay competitive in the long term if they refuse to implement new technologies.

HOW	Basically there are two main streams of DSS co-existing: ► Some focus on one or just a few crop/pest systems. In many cases these computer programs are available on the market as CD-ROMs and/or are the property of an organisation providing advice for farmers. The opposite end is the complex web-based service covering many crop/pest systems. In the latter case, the end-user pays a regular fee for access to the service on an internet platform. ► In most cases all types of input data that can be extracted by an automated procedure, such as records of weather stations and several internet databases, are put into the system independently from the end-user. However, the end-user has to 'hand-feed' the system with at least some of the input data, that which is specific to their farming practice. ► System outputs can be diverse and they are in many cases up to the choice of the end-user: email alert, sms alert, regular expert analysis etc.
SOURCES	ENDURE WEBSITE http://www.endure-network.eu/endure_publications/deliverables: DI 2.4 : **Review (hard-copy and electronic) of new technologies critical to effective implementation of DSS and FMS** http://www.endure-network.eu/about_endure/all_the_news/online_analysis_of_late_blight_dss: **On-line analysis of late blight DSS** http://www.endure-network.eu/about_endure/all_the_news/dss_helping_farmers_make_smart_decisions: **DSS: helping farmers make smart decisions** ENDURE INFORMATION CENTRE http://www.endureinformationcentre.eu → key words: Measures > Decision support / Control > Decision support systems