

EXSYS Case Study

Seed Selection for Best Yield and Profit

KW & Associates /University of Illinois

Each year soybean farmers mull over a decision that can cost them yield and profit – *Which of the many soybean varieties to plant?* Location, resistance to pests and disease, and management plans are all-important, and some of these interact with each other.



The “SOYSEED” program puts an “expert” at the farmer's elbow. The knowledge automation system gives the same recommendations an expert would, based on answers to questions, which are specifically tailored to each farmer's situation. The program combines "expert intuition" with hard data. Farmers, farm managers and farm advisors use SOYSEED, and it serves as an experimental and demonstration program in agronomy.

SOYSEED screens 29 varieties of soybeans for suitability to a farmer's location, field conditions, farming plans, and need for pest and disease resistance. It lists varieties that are reasonable choices and their yield chances under certain conditions. The farmer can see the agronomic reasoning behind each recommendation and run "what if" scenarios to see how his preferred management affects choices. Questions are simple and limited. For example, instead of asking the farmer his "maturity group region" which determines the type of bean that can develop adequately, the program lets him show his location on a screen map of Illinois, Indiana, or the entire Midwest.