Ontology-based Advisory System for Cotton Crop Farmers

Abstract

Different parts of the country have recently witnessed a large number of suicide deaths by the farmers who found themselves in extreme distress. A variety of factors are held as responsible for the farmers' suicides which includes a) adverse seasonal conditions, b) lack of irrigation facilities, c) massive pest attack, d) wrong agricultural practices and failure of extension services: excessive use of pesticides, mono-cropping, wrong selection of seeds, dependency on private dealers for technical advice, e) spurious pesticides and seeds, f) increase in the cost of cultivation, and d) low yields and adverse prices. To address some of these problems, this work proposes the development of an expert system (Agro-Advisory System) which provides valuable answers to farmer queries. Agro-Advisory System is an ontology based knowledge system that provides query-answering support for farmers. Farmers encounter many questions on cropping depending on climate, diseases on crops, pests, preventions, timelines of various activities etc. To handle these queries, the old procedure was to collect the questions from farmers and record these questions, then search for the answers to these questions manually from documents provided by agricultural experts. Sometimes lack of experts and their expertise...
creates problem, so we choose expert system approach to solve this problem.

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Index Terms

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