

## **Hatch Project (2008-1010)**

### **Development of a Dairy Economic Decision Support System for Wisconsin**

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**The Specific Aim of this proposal is to assess management strategies to improve cost-efficiency and profitability in Wisconsin dairy farms** through participatory research on dairy farms. Systems analyses and operation research (Hillier and Lieberman, 2004) will be used to simulate dairy herd systems to test and integrate new technologies and knowledge (e.g., nutrition, reproduction, physiology, health, genetics) for strategic dairy management. Emphasis will be given to artificial intelligence using computer simulation research and the development of custom-made software and a decision support system (**DSS**) tool, which will be carefully designed, user-friendly, and extensively tested. This project will follow a participatory framework with scientists, dairy producers, Extension agents, and dairy industry consultants to provide research-based farm management responses to current industry needs. The participatory approach will include the development and maintenance of a Web portal as a communication hub in the process of technology transfer.