

Computer To Trouble Shoot Mastitis Problems

UNIVERSITY PARK (Centre Co.) — An expert system being developed at Penn State may help dairy farmers reduce costs and increase profits by helping them diagnose and control mastitis, the costliest disease of dairy cattle.

By reducing milk production ruining udder tissue and even killing dairy cows, mastitis costs an estimated \$2 billion in North America each year.

"Mastitis causes estimated losses of \$200 per cow every year," said Dr. William Heald, professor of animal science in Penn State's College of Agricultural Sciences. "It cuts farm income and lowers milk quality, cheese yield and shelf life.

"By minimizing mastitis, dairy farmers can increase milk production and reduce veterinarian and drug expenses, leading to increased farm income levels."

Heald began developing the Bovine Mastitis Diagnostic Expert System in 1991. A final version, intended for use on IBM personal computers, may be available as early as fall 1993. The expert system analyzes DHIA data and responds to descriptions of symptoms. Using this information, the system analyzes the problem and suggests a potential solution.

The system has three main components. An information module contains data on mastitis

pathogens, infection methods, somatic cell counts, economic losses, mastitis control procedures and more. "The system uses this information to analyze on-farm problems," said Heald, "but it also will display this basic information for farmers who wish to learn more about mastitis in general."

The other two modules allow producers to analyze mastitis data by either the entire herd or the individual cow. "By asking the farmer questions and using DHIA data, the system tries to determine which pathogen is most likely to be responsible for the problem and then makes recommendations," Heald said.

The system contains informa-

tion on causes and controls for the two main types of mastitis, clinical and subclinical. "Clinical mastitis symptoms, including lumpy or watery milk, fever, depression and lack of appetite, can be detected easily," said Heald. "But only 5 to 10 percent of mastitis cases are clinical."

Subclinical mastitis, which has no apparent symptoms, is the most common form of the disease, affecting between 30 and 50 percent of dairy cows. "Subclinical mastitis causes the greatest overall milk loss because it's so hard to detect," Heald said.

"In an average herd, 30 to 40 percent of all cows may have subclinical mastitis. But without visi-

ble symptoms, a cow's milk must be tested to determine whether a subclinical infection exists."

With DHIA data about a cow's somatic cell count, farmers can use the expert system to analyze the possibility that a cow has subclinical mastitis. "If more subclinical cases could be detected early on, dairy producers could stop losing money to decreased milk production," Heald said.

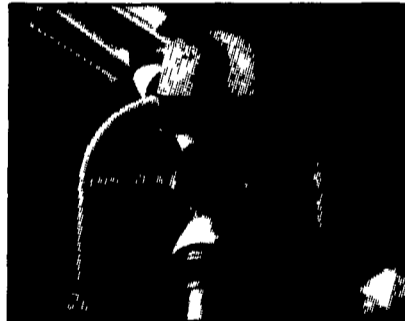


Cut and dried.



Kuhn's FC series Mower Conditioners—faster cutting, faster drying, better hay. But what else would you expect from the recognized worldwide leader in mower/conditioner technology? Kuhn applied over 160 years of research to build a mower/conditioner that cuts quicker and requires less dry down than many other systems on the market. And Kuhn's FC series is easy on your crop. Choose finger comb or roller conditioning to match your crop conditions.

Easy to operate and easy to maintain, Kuhn is the only manufacturer to



**New for '93—
Cost Effective GT Swivel Hitch**

design a cutter bar exclusively for mower/conditioners to ensure longer life.

Three hitch types available to fit your pocketbook. The GT and Gyrodine® Hitches allow tight 90° turns while providing longer driveline life.

Kuhn's got just the right conditioner for you. Available in the following sizes:

- 6'7" 3-point model
- 8'2", 9'10" and 11'6" pull-type models

Kuhn's FC series of Mower/Conditioners are the answer to producing a superior crop. Check them out at your Kuhn Dealer today!



Your Kuhn Dealer Is:

Bechtelsville, PA
Miller Equipment Co.

Bedford, PA
Bench Farm Equipment

Cochranville, PA
Stoltzfus Farm Service

Columbus, PA
Reed Brothers Equipment

Corry, PA
Wiggers Farm Equipment

Eighty Four, PA
Field Implement Store

Evert, PA
Morris International

Lebanon, PA
Umberger's Of Fontana

Mahaffey, PA
Hutton Farm Equipment

Needmore, PA
Clugston Farm Equipment

New Holland, PA
ABC Groff Inc.

New Oxford, PA
Sibert Farm Equipment

New Alexandria, PA
Lone Maple Sales & Service

New Bethlehem, PA
Hetricks Farm Supply

Perryopolis, PA
John Brown Equipment

Rices Landing, PA
Goslin Sales, Inc.

Saxonburg, PA
Albert Vettori

Somerset, PA
Summit Machinery Inc.

Waynesboro, PA
B Equipment, Inc.

West Clifford, PA
Northeast Dist. & Equip.