A click-and-calculate solution

New Mexico dairy specialist is developing a computer model to optimize dairy operations

By Catherine Merlo

From the Agricultural Science Center at Clovis, N.M., Victor Cabrera (left) will produce a computer-simulated dairy model to aid New Mexico operations. Producer Art Schaap (right) is working with Cabrera to share real farm data.

PHOTO: STEVE CORNETT

Can a single computer application analyze your dairy's entire operation, detect its weaknesses and pinpoint which practices could be optimized?

Victor Cabrera thinks so.

Cabrera is the new dairy specialist, researcher and assistant professor at New Mexico State University's Cooperative Extension Service. He has just begun developing a computer model that will simulate a whole dairy, integrating all aspects so a producer can compare, estimate and analyze operational costs, procedures and other dairy functions.

"I am going to look at data that is common to all dairies and then represent any dairy by adjusting information," says Cabrera, who is a native of Peru. "We can see what's happening in real time at a dairy, and forecast what would happen in the whole dairy farm system when there is a change in any of its components."

The model will be based on information collected from many of New Mexico's 172 dairies.

Cabrera hopes to use a common computer application, such as Microsoft Excel, to run his computer model. With it, producers would be able to see what would happen at their dairies if they plugged in different sets of "what if" scenarios to produce alternate results. For example, how many cows will be calving next month? How much milk production can be expected? What results could you expect if you changed your herd's diet?

"The model will use real data," he says. "But farmers don't want to spend the whole day inputting data, so the less we ask, the better."

Cabrera has started his research with core dairy components: herd dynamics, crop system, feed and nutrition, milking parlor, and manure management. He will incorporate pregnancy and conception rates on a seasonal basis, factoring in the age and stage of each group of cows.

While he plans to include all >>

Simulating a dairy

◆ **The program will help producers compare, estimate and analyze operational costs, procedures and other dairy functions.**
◆ **The model may use programs like Microsoft Excel so producers can plug in "what if" scenarios.**
◆ **For further information, visit *http://dairy.nmsu.edu*.**