

Dairy Reproduction Troubleshooting Focus Of Extension Meeting

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HONEY BROOK (Chester Co.) To address the specific topic of dairy reproduction, extension services in southeastern Pennsylvania organized several meetings to educate producers.

Two meetings in Berks County, one in Chester County, and one in the Montgomery/Bucks area gave dairy farmers critical information on important facets of their business.

Nutrition's Impact On Reproduction

Dr. Michael O'Connor, reproduction specialist and professor of dairy science at Penn State, spread the word about new breeding management techniques and encouraged producers to have a carefully-planned, instead of random, approach to reproduction.

O'Connor also attempted to show "how effective and labor-saving these systems can be," he said. Reproduction management is not just injecting a cow but putting a system into place and working with the cow, he said.

O'Connor began his presentation by teaching about nutrition and its effect on reproduction. O'Connor also covered several methods of reproduction used on dairy farms.

Nutrition concerns for optimal reproduction was first on the speaker's agenda. "Energy intake and energy balance are the most important factors in reproduction," he said.

Since energy levels are so integral to successful breeding, how does a producer see what the herd's status is on the amount of energy?

Evaluate body condition, said O'Connor. "A cow should not exceed one body condition score loss between the time she calves and the time you want to breed her for the first time."

A minor loss would .5 or lower during the first five weeks of lactation. Consequently, keeping a cow in good condition and cycling properly as soon as feasible has direct impact on breeding efficiency.

Researchers in a Michigan study found that health problems were less associated with conception failure than a change in body conditioning score. Cows ate less, produced less milk, and took more energy reserves to produce milk than cows with earlier ovulations.

The cycle perpetuates itself as cows with lower energy reserves use the energy off their body flesh, further inhibiting ovulation. Adequate feed bunk space, frequent feeding, and a clean feed bunk will encourage dry matter intake.

The other side of the coin, overconditioning, may also be detrimental to reproduction. Heifers just coming fresh are often overconditioned, said O'Connor. Typically, an overconditioned animal has poor uterus muscle tone, leading to difficult births or a retained placenta. Consequently the cow is more susceptible to uterine infection. Overconditioned dry cows are also two-and-a-half times more likely to develop cystic ovaries.

Ammonia

Low ammonia levels are also important to reproductive



Holsteins cluster between the fence and pond in Oley, Berks County. Photo by Michelle Ranck

health. High levels of ammonia, said O'Connor, produce a transformation to urea. High urea levels may alter the composition of the uterus, reduce the acid level, or have an effect on the sperm cells.

European researchers studying crossbred heifers found that ammonia has an adverse effect on the growth of eggs.

In addition, energy is taken from the cow to detoxify the ammonia from the urea, taxing an animal with low levels of necessary energy.

"If you have an animal and it already has a negative energy balance and you feed it a high ammonia diet, it's really magnifying the postpartum energy deficit. You're asking them to expend energy to detoxify the ammonia."

Not getting enough water may also increase the high ammonia problem, as water helps to dilute the urea. Additionally heat stress may compound the problem. Milk Urea Nitrogen (MUN) is a good diagnostic tool for the protein status of a herd, said O'Connor.

"When a group of cows have 19-20 mg percent MUN, the reproduction percentage can be compromised. I wouldn't get concerned about one cow, but when a group shows high levels, I'm suspicious of the way the ration has been managed from a protein standpoint."

A certain level of starch in the diet is beneficial for the rumen microbes to manufacture protein, which in turn generates milk production.

Dairy producers, said O'Connor, have to look in the mirror and decide if their own breeding system and techniques are "up to snuff before they get too excited about MUN numbers and saying, 'that's my problem.'"

He said, "Please, don't go out and risk lowering your milk production by lowering your protein today." O'Connor encouraged instead testing and working on a DHIA program.

O'Connor also addressed minerals and their effect on dairy reproduction. "So often people say, 'My herd has retained placentas, so I must have low selenium levels,'" said

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